1365. Sharma (K. D.), Shrivastav (J. B.), & Agarwal (S.). **Ocular rhinosporidiosis simulating a tumour.**—*Brit. J. Ophthal.*, **42**, 9, pp. 572–574, 3 fig., 1958.

In this case of infection by *Rhinosporidium seeberi* a lobulated mass, 8 cm. at its max. diam., covered the whole right lower eyelid and eyeball of a male patient at the med. Coll. Hosp., Nagpur, India. Microscopical examination revealed numerous sporangia, 50–100 μ diam., encircled by a double-contoured, chitinous envelope and containing many spores, some lying free in the stroma. In some fields spores and empty sporangial envelopes were surrounded by dense inflammatory exudate and occasional extraneous giant cells.

1366. Hasenclever (H. F.) & Mitchell (W.). **Attempts to immunize Mice against sporotrichosis.**—*J. invest. Derm.*, **33**, 3, pp. 145–149, 1959.

At the Lab. Infectious Diseases, Nat. Inst. Health, Bethesda, Md, evidence was obtained of slight protection of mice against sporotrichosis following immunization with formalin-killed suspensions of *Sporotrichum schenckii*. Attempts at passive immunization did not modify the course of the infection [cf. **2**, No. 1845]. Since all animals were still infected at the end of the experimental period, interpretation of the results was based on survivor numbers.

1367. Mizuba (S. S.). **Pathogenicity and nutritional studies of Sporotrichum schenckii (Matruchot 1905) and variants obtained by ultra violet irradiation.**—*Diss. Abstr.*, **19**, 12, p. 3097, 1959.

The author reports, from Michigan State Univ., comparative studies on the morphology, pathogenicity, and nutrition of 3 strains of *S. schenckii* and mutants and variants thereof, obtained by ultra-violet irradiation. The non-pathogenic *S. epigeum* was also included. Several yeast and pleomorphic forms of *S. schenckii* were obtained which normally occur only in the living host or on special enriched media at 37° C., and those which survived continual transfer without change were included in the studies along with mycelial variants. Blood from several animal spp. exhibited antifungal activity when included in Sabouraud's dextrose agar incubated at 37°. Mycelial strains infected mice more readily than yeast or pleomorphic strains. In C source studies no single carbohydrate gave excellent growth of all strains [cf. **1**, No. 2031]. Potassium nitrate, ammonium nitrate, and DL-isoleucine were poor N sources, and no single N source gave excellent growth of all strains. In both C and N source studies the mutant strains were less vigorous than their parent strains.

1368. Kunz (C.). **Fluorescenz-serologische Untersuchungen an einem pathogenen Pilzstamm (Sporotrichum schenckii).** [Fluorescence-serological studies on a pathogenic fungus strain (*S. schenckii*).]—*Arch. klin. exp. Derm.*, **209**, 2, pp. 200–205, 4 fig., 1959. [11 ref.]

At the Hygiene-Institut, Univ. Vienna, rabbits were immunized with the mycelial phase of *S. schenckii* and the immune globulins coupled with fluorescin-isocyanate (*J. exp. Med.*, **91**, p. 1, 1950). The individual cells of the fungus, both in culture streaks and in frozen sections and dab preparations from infected animals, could be stained with the marked antibody solution, a specific reaction shared by none of the other 18 spp. tested. Moreover, even the detritus of disintegrated or phagocytized elements of *S. schenckii* gave a specific antigen-antibody response.

1369. Post (G. W.), Jackson (A.), Garber (Pauline E.), & Veach (Gloria E.). **Pulmonary sporotrichosis.**—*Dis. Chest*, **34**, 4, pp. 455–459, 6 fig., 1958.

An account, from the Veterans Administration Center, Wadsworth, Kan., of pulmonary sporotrichosis (*Sporotrichum schenckii*) in a 53-yr.-old white man, having a history of 'lung trouble', which had worsened in the 2 yr. preceding his admission. The patient denied having had skin lesions. There was a positive reaction to blastomycin yeast phase antigen (titre 1 : 8). Checking for *Sporotrichum* infection should be a routine in the case of obscure lung infections.

1370. Miranda (R. N.), Cunha (C.), & Schweidson (J.). **Tratamiento de la esporotricosis por la esporotrichina.** [The treatment of sporotrichosis with sporotrichin.]—*Arch. argent. Derm.*, **42**, pp. 199–202, 1958. [Engl. summ.]

At the Univ. Paraná, Curitiba, Brazil, 8 sporotrichosis patients were treated with intradermal injections of a standardized heat-killed suspension of the yeast phase of *Sporotrichum schenckii*. Strong and necrotic reactions as well as gummatous lesions were provoked [**2**, No. 1076, 1427; **3**, No. 144]. An improvement of the sporotrichosis lesions was observed and 5 patients were cured after only 1 injection, 2 after 2 and 1 after 8 injections administered during 3 years' treatment.

1371. Anderson (B.), Roberts (S. S.), Gonzalez (C.), & Chick (E. W.). **Mycotic ulcerative keratitis.**—*Arch. Ophthal., N.Y.*, **62**, 2, pp. 169–179, 6 fig., 1959. [18 ref.]

Five cases are reported with a full discussion from the Duke med. Center and Veterans Administration Hosp., Durham, N. Carol., associated with infection by (1) *Curvularia lunata*, (2) *Penicillium spinulosum* and a maize smut [? *Ustilago maydis*], (3) *Gibberella fujikuroi*, (4) *P. spinulosum* and *Fusidium terricola*, and (5) *Aspergillus versicolor*. The increasing frequency of the disease [cf. **3**, No. 1295] coincides with the extended use of combined antibiotics and corticosteroids. The authors' patients were successfully treated by means of keratoplasty and amphotericin B.

1372. Nguyen-Van-Al, Nguyen-Tri-Loc, Nguyen-Van-Ut, & Tran-Ngoc-Ninh. **Mycétome rhinosporidien avec ostéite. Seconde note.** [Rhinosporidial mycetoma with osteitis. Second note.]—*Bull. Soc. Path. exot.*, **52**, 2, pp. 140–142, 8 fig., 1959. [4 ref.]

This report [cf. **3**, No. 757] from the Institut Pasteur and 2 hospitals in Saigon, Indo-China, concerns a 25-yr.-old farmer suffering from nasal, cutaneous, and osteo-cuticular lesions (believed to be the 1st on record) due to recurrent infection by *Rhinosporidium seeberi*.

1373. Alecrim (I.). **Considerações sôbre o gênero Redaellia Ciferri, 1930.** [Comments on the genus *Redaellia* Ciferri, 1930.]—*An. Fac. Med. Univ. Recife*, **18**, 1, pp. 81–85, 1958.

At the Facultade de Medicina, Univ. Recife, Brazil, *R. elegans*, isolated from a chronic lesion of the mucosa of the oral cavity of a man, is considered to be a saprophyte. A mycological study of this rare sp. is reported. Some hyphae produce acrogenous multiple budding and the primary buds may produce secondary sprouts giving rise to some structures which are compared with abnormally developed conidiophores of *Aspergillus*.

1374. Totten (R. S.), Reid (D. H.), Davis (H. D.), & Moran (T. J.). **Farmer's lung. Report of two cases in which lung biopsies were performed.**—*Amer. J. Med.*, **25**, 5, pp. 803–809, 12 fig., 1958. [13 ref.]

The 1st of these cases from Western Pennsylvania fully reported by the Dept Path. Med., Univ. Pittsburg, was in a 34-yr.-old farm labourer who developed extreme

dyspnoea in Sept. 1953 3 hr. after working for 2 hr. in a silage bin removing mouldy 3-month-old corn silage. He returned to work after 2 weeks. In 1954 he had a similar illness after working with mouldy hay, and in 1957 a further and more severe attack. Biopsy material showed numerous miliary and submiliary granulomas, extensive interstitial thickening with slight fibrosis, and a focal type of bronchiolitis. No foreign material was detected and staining for fungi was negative.

The 2nd was of a 38-yr.-old white farm worker who became ill a few hours after threshing in 1950. In 1956 the disorder recurred and he was admitted to hospital in Apr. 1957. Biopsy material was similar to that in the 1st case except that unidentified foreign bodies were seen; no organisms were detected.

1375. Bringhurst (L. S.), Byrne (R. N.), & Gershon-Cohen (J.). **Respiratory disease of mushroom workers. Farmer's lung.**—*J. Amer. med. Ass.*, **171**, 1, pp. 15–18, 2 fig., 1959. [11 ref.]

It is reported from the Dept Radiology, Chester County Hosp., Pa, that during the past 2 yr. 16 cases of respiratory disease similar to farmers' lung [see above] were encountered among migrant Puerto Rican workers in the local mushroom industry. Patients seem to develop a prompt response to exposure to mouldy compost. Resolution is rapid in acute stages; increased fibrosis is encountered in the chronic stage.

1376. Blackley (C. H.). **Experimental researches on the causes and nature of catarrhus aestivus (hay-fever or hay-asthma).**—ix+202 pp., London, Dawson's of Pall Mall, 1959. 30*s*.

This is a facsimile reprint, issued on the occasion of the 4th European Congress of Allergy, London, of Blackley's classical study originally published in 1873; a work of particular interest to mycologists for the reference to Blackley's experiment on himself with fungus spores as allergens (p. 57). A biographical note on Blackley by R. J. S. McDowell has been inserted in the reprint.

1377. Alecrim (I.) & Teixeira (Haydée). **Fungos anemófilos da cidade do Recife, Pernambuco-Brasil.** [Airborne fungi in the city of Recife, Pernambuco, Brazil.]—*An. Fac. Med. Recife*, **18**, 2, pp. 269–274, 1958.

Sabouraud agar plates were exposed for 15 min. in several zones of the city. Species of *Aspergillus*, *Penicillium*, *Fusarium*, *Curvularia*, and *Monilia* were found at all sites. It is emphasized that species of *Alternaria* and *Hormodendrum* [*Cladosporium*] were not isolated.

1378. Pepys (J.). **Allergic hypersensitivity to fungi.**—*Postgrad. med. J.*, **35**, 406, pp. 436–440, 469, 1959. [32 ref.]

A critical review and discussion presented under the headings of delayed, tuberculin type of hypersensitivity; immediate, anaphylactic type; Arthus type; fungal hypersensitivity; hypersensitivity to (*a*) pathogenic and (*b*) non-pathogenic fungi; general considerations; localization of 'id' eruptions; and effect of immediate reactions on appearance of delayed reactions to skin tests.

1379. Pidoplichko (N. M.). Грибная флора грубых кормов [The fungal flora of coarse fodders.]—487 pp., 106 fig., published by the Acad. Sci., Ukrainian S.S.R., Kiev, 1953. Roubles 29.25. [203 ref.]

This monograph from the D. K. Zabolotnŷĭ Inst. Microbiol., Acad. Sci., Ukrainian S.S.R., is an attempt to assemble the scattered data on the fungal flora of fodder and fodder plants and the results of the author's own researches. A brief general introduction to fungi (pp. 7–16) is followed by descriptions (frequently with keys) of

fungi occurring on fodder plants both in storage and in the field (pp. 16–362). There are sections on toxic fungi in fodders (pp. 363–395), the ecology of fungi on fodders (pp. 396–416), and methods for studying them (pp. 417–436). Over a 12-yr. period the author examined over 6,000 specimens of fodder plants, and some 200 hay and straw samples from the Ukraine, Moldavia, Bashkiria, and the N. Caucasus. In addition to a list of the plants studied (pp. 446–448), there is a host/parasite index (pp. 465–475) and a general index of fungi (pp. 449–464), a key for determining the commoner fungi on fodders (pp. 476–481), and an index of plants (pp. 482–486).

1380. Thornton (R. H.) & Ross (D. J.). **The isolation and cultivation of some fungi from soils and pastures associated with facial eczema disease of Sheep.**—*N.Z. J. agric. Res.*, **2**, 5, pp. 1002–1016, 1 fig., 1959. [26 ref.]

This is a report on recent work at the Soil Bureau, D.S.I.R., Wellington [cf. **3**, No. 769, 775, and below]. Eleven fungi, viz. *Fusarium oxysporum* (4 strs.), *F. culmorum*, *Trichoderma viride* (3 strs.), *Sclerotinia trifoliorum*, *Chaetomium* sp., and *Sporidesmium bakeri*, were grown on Czapek-Dox and Raulin-Thom media and fed to guinea-pigs. Examination of livers at Wallaceville Animal Res. Sta. gave no evidence of toxicity. Beaker tests [loc. cit.] at Ruakura Animal Res. Sta. were all negative, except in the case of high-sporing *S. bakeri* str. cultured on a number of media, including macerated fungal felts and culture fluids [cf. loc. cit.].

1381. Percival (J. C.). **Photosensitivity diseases in New Zealand. XVII. The association of Sporidesmium bakeri with facial eczema.**—*N.Z. J. agric. Res.*, **2**, 5, pp. 1041–1056, 1959. [19 ref.]

Experiments are reported which confirmed the toxicity of *S. bakeri* mycelium [see above]. Icterus in the affected lambs is mentioned as an additional symptom. The virulence of the disease depends in general on toxin concentration, though there is a considerable variation in animal response within these limits.

1382. Lloyd (A. B.) & Clark (R. T. J.). **Spore production by Sporidesmium bakeri on Ryecorn (Secale cereale).**—*N.Z. J. agric. Res.*, **2**, 5, p. 1084, 1959. [1 ref.]

A profuse yield of spores of *S. bakeri* [see above] was obtained at the D.S.I.R., Palmerston North, N.Z., by spore inoculation of rye seeds (soaked overnight in water, dispensed in 4-in. layers in bottles, and autoclaved at 10 lb. for 30 min.) and incubation at 23–25° C. for 12–16 days.

1383. **Isolation of poison causing facial eczema brings control nearer.**—*N.Z. J. Agric.*, **99**, 6, pp. 511–512, 2 fig., 1959.

In this semi-popular note the toxin produced by *Sporodesmium bakeri* is referred to as 'sporodesmin' [see above].

1384. Bocker (Dorothy). **Fungus infections. A bibliography, covering literature of 1952 through September 1958.**—90 pp., Washington, D.C., U.S. Dept Health, Education, & Welfare, 1959.

This bibliography from the Reference Division of the National Library of Medicine lists 942 items arranged alphabetically by authors under the principal mycoses of man, with a supplement of general books and articles dealing with more than one type of infection.

1385. **Animal health yearbook ; Annuaire de la santé animale ; Anuario de sanidad animal. 1958.**—201+vi pp., F.A.O. 10*s.* ($2).

This publication, by tabulations and code numbers, indicates the incidence, groups of animals affected, and control practices in FAO member countries of the major diseases of animals, including epizootic lymphangitis (*Cryptococcus farciminosus*)

[*Histoplasma farciminosum*], lumpy wool (*Actinomyces* [*Dermatophilus*] *dermatonomus*), actinomycosis [*Actinomyces* and *Actinobacillus*], and aspergillosis (*Aspergillus flavus*) of bees.

1386. Pool (W. A.) (Editor). **The Veterinary Annual. First year. 1959.**—xiii+363 pp., 36 plates, 10 text-fig., Bristol, John Wright & Sons Ltd., 1959. 42*s*.

In the 1st number of this new annual a series of special articles on veterinary work in various countries and other topics, and lists of new drugs and appliances, supplement a review of current literature (pp. 57–338) which includes a section on fungus diseases of animals (pp. 98–100, 16 ref.; by G. C. Ainsworth).

1387. Stableforth (A. W.) & Galloway (I. A.). **Infectious diseases of animals. Diseases due to Bacteria.**—2 vols., pp. i–x+1–396, i–x+397–810, London, Butterworths Scientific Publications, 1959. £8.8*s*. (the 2 vols.).

Vol. **1** of this work includes a chapt. by T. J. Bosworth, 'Actinomycosis and actinobacillosis' (pp. 1–15, 7 fig., 68 ref.), reviewing current knowledge on the diseases caused by *Actinomyces bovis* and *Actinobacillus lignieresi* and one by G. C. Ainsworth, 'Fungal diseases' (pp. 255–295, 19 fig., 124 ref.), summarizing the characteristics of the principal mycoses affecting animals [cf. **3**, No. 929].

1388. Pinetti (P.). **Rivista critica della letteratura micologica medica in Italia tra il 1946 ed il 1956.** [A critical review of medical mycological literature in Italy between 1946 and 1956.]—*Mycopathologia*, **11**, 1–2, pp. 155–169, 1959.

This review is divided into sections dealing, respectively, with dermatomycoses and dermatophytes (74 ref.); *Candida albicans* and other yeast-like organisms and the mycoses caused by them (62 ref.); *Aspergillus* and *Penicillium* spp. and the mycoses caused by them (8 ref.) [cf. **2**, No. 1760, *et passim*]; actinomycetes and actinomycosis (31 ref.); coccidiomycosis (2 ref.) [**1**, Nos. 925, 2429]; S. American blastomycosis (1 ref.) [**2**, No. 1509]; sporotrichosis (3 ref.) [cf. **1**, No. 2032]; and histoplasmosis (10 ref.) [cf. **2**, No. 2082]. Most of the work discussed has been noticed in this *Review* [see also **2**, Nos. 1592, 1883; **3**, Nos. 36, 49, *et passim*].

1389. Chmel (L.). **Critical survey of medical mycology in Czechoslovakia for the years 1946 to 1956.**—*Mycopathologia*, **12**, 1, pp. 76–95, 3 maps, 3 graphs, 1959.

This survey, virtually restricted to dermatophytes, is based on 92 ref., 17 to the author's own work [cf. **3**, No. 615] at the Dermato-venerologic Clinic, Bratislava. The incidence of dermatomycoses was substantially greater in Slovakia than Bohemia. Zoophilic representatives of *Trichophyton* and *Microsporum* outnumbered anthropophilic ones in Slovakia, whereas in Bohemia the groups are either equal or the anthropophilic group predominates.

1390. **Cartilla micológica.** [Mycological primer.]—Reprinted from *Bol. Hosp. Carácas*, **57**, 1–2, 138 pp., 1958.

This useful handbook for readers of Spanish, prepared for the Comisión Coordinadora del Estudio Nacional de las Micosis, Carácas, Venezuela, comprises a series of summaries by 10 authors of the essential features of the principal systemic and superficial mycoses of man. Each disease is treated under a number of headings, such as definition, synonyms, geographical distribution, diagnosis, clinical forms, serology, treatment, etc., and for each there is a bibliography, mostly of references to the Venezuelan literature [cf. **3**, No. 618].

1391. Capretti (C.). **Elenco de la colección micológica.** [List of the mycological collection.]—12 pp., Merida, Venezuela, Universidad de Los Andes, 1959.

Of the 87 cultures in the collection of the Laboratorio de Microbiologia (Seccion de Micologia), Univ. Los Andes, many are of interest to medical mycologists.

1392. **Fungus diseases.** *Bull. Calcutta Sch. trop. Med.*, **7**, 2, 48 pp., 1959.

This special number is devoted to the Symposium on Fungus Diseases in India, held at the Sch. trop. Med., Calcutta, 5–7 Feb., 1959. Forty-two papers presented by Indian workers are covered by brief abstracts, and some will appear in full in later numbers of the Bulletin. Distinguished visitors included Dr. Ajello (Communicable Disease Center, Atlanta, Ga), who read papers on the epidemiology of ringworm infections, and the isolation and identification of the dermatophytes, and Dr. Riddell (Brompton Hosp., London), who lectured on the role of *Candida albicans* as a human pathogen, and of *Aspergillus fumigatus* in pulmonary disease.

On pp. 52–78 appears a useful digest (abridged from 'Methods in medical mycology' (*CDC Laboratory Manual* [not available for general distribution]) by L. Ajello & L. K. Georg) of methods appropriate to the study of fungal pathogens occurring in India. This includes charts of the taxonomic features of dermatophytes, a key to the tissue forms of pathogenic fungi, and an identification chart for *Candida* spp.

1393. **Annual Report of the Division of Laboratories and Research, New York State Department of Health, 1958.**—134 pp., 1958. [Received Oct. 1959.]

On pp. 45–47 of this report [cf. **3**, No. 630] Rachel Brown, Elizabeth L. Hazen, & C. L. Greene describe further studies of the complement-fixing antigens of *Histoplasma capsulatum*. The aim is to obtain, by chemical means, reproducible water-soluble fractions having specific and sensitive activity. Washed yeast-phase cells were suspended in cold conc. HCl (to dissolve the chitin of the cell wall) and centrifuged, the viscous acid extract being dialysed against distilled water and centrifuged to remove the heavy precipitate which formed. The supernatant was designated Fraction VI. The precipitate was suspended in normal NaOH, dialysed against distilled water, and centrifuged, the supernatant being designated Fraction IX. Both fractions, rendered isotonic before use in quantitative complement fixation tests [loc. cit.], were highly reactive to hyperimmune rabbit sera to *H. capsulatum* and *Blastomyces dermatitidis*, and moderately reactive to human serum from a presumptive case of histoplasmosis. It was possible, by careful treatment with NaOH, to selectively eliminate the reactivity of Fraction VI for immune rabbit serum to *B. dermatitidis*. Both fractions will be studied further.

M. R. Edwards, Elizabeth L. Hazen, & G. A. Edwards (p. 56) describe in some detail the micromorphology of tuberculate chlamydospores of *H. capsulatum*.

In the section on diagnostic mycology (pp. 94–97) Elizabeth L. Hazen & G. N. Little describe the progress of 3-day seminars for laboratory personnel in mycological techniques. Twenty local laboratories were approved for mycological diagnosis during the year. Brief details are given of the specimens received.

Elizabeth L. Hazen & C. H. Greene (pp. 97–99) describe the results of serological testing for histoplasmosis and blastomycosis. Early in the year saline extract antigens prepared from yeast phase *H. capsulatum* and *B. dermatitidis*, for use in the quantitative complement fixation test, were abandoned [see above]. The histoplasmin now in use is prepared from the mycelial phase. Results of the tests are summarized.

1394. Carneiro (J. F.). **Micoses pulmonares no Brasil.** [Pulmonary mycoses in Brazil.]—*Rev. bras. Med.*, **16**, 4, pp. 277–283, 1959.

It is stated that most cases are of South American blastomycosis (*Paracoccidioides brasiliensis*), that the literature does not show the true frequency of histoplasmosis (*Histoplasma capsulatum*), and that no cases of coccidioidomycosis (*Coccidioides immitis*) or Gilchrist's disease (*Blastomyces dermatitidis*) have been reported in Brazil.

1395. Chapman (J. S.). **Fungus diseases of the lung.**—*Dallas med. J.*, **45**, 9, pp. 465–471, 8 fig., 1959.

Essential information is presented on mycoses prevalent in the S.-W. of U.S.A., with special reference to Texas, caused principally by *Coccidioides immitis* [**3**, No. 1506], *Histoplasma capsulatum*, and *Blastomyces dermatitidis*. Some observations are also included on *Nocardia* spp. and *Cryptococcus neoformans*. Contact with contaminated soil is believed to be the main source of infection.

1396. De Gregorio García Serrano (E.). **Dermatomicosis por levaduras ; su clínica, diagnóstico y tratamiento.** [Mycoses of the skin due to yeasts. Clinical aspects, diagnosis and treatment.]—*Clín. y Lab.*, **68**, 400, pp. 10–18, 1959.

A review.

1397. Cooke (W. B.). **An ecological life history of Aureobasidium pullulans (De Bary) Arnaud.**—*Mycopathologia*, **12**, 1, pp. 1–45, 1959. [Fr. summ. Numerous ref.]

This detailed account of the fungus, from the Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio, covers systematic aspects, phenology, habitat, physiology, relationships with other fungi, the effects of antibiotics and chemical agents, and viability. *Pullularia pullulans*, *Foxia mansonii* (*Cladosporium mansonii*), and *C. werneckii* are included in the long list of synonyms.

1398. Schönfeld (J.) & Rieth (H.). **Möglichkeiten der Chemotherapie bei inneren Mykosen.** [Possibilities of chemotherapy for systemic mycoses.]—*Med. Mschr.*, **12**, 7, pp. 447–454, 1958. [Engl. summ. 120 ref.]

This résumé of the possibilities of antibiotic and chemotherapy in the various systemic mycoses is based on a review of the literature.

1399. Fedors (P.). **Inhibition of Histoplasma capsulatum and Blastomyces dermatitidis by Pseudomonas aeruginosa in vitro.**—*Mycopathologia*, **11**, 1–2, pp. 128–134, 1959.

At the Veterans Administration Hosp., Outwood Station, Dawson Springs, Ky, an alpha-oxyphenazine-containing fraction, obtained by chloroform extraction of a 7-day culture of *P. aeruginosa* on brain-heart broth, was found to be completely inhibitory to cultures of *H. capsulatum* and *B. dermatitidis*, at 4^{-7} and 4^{-4} g./ml. medium, respectively. Cultures of *Cryptococcus neoformans*, *Candida albicans*, and *Sporotrichum schenckii* were not inhibited at 4^{-4} g./ml.

1400. Silva (Angelina P.). **Acción antimicrobiana de algunos antibióticos extraídos de hongos superiores.** [Antimicrobial action of several antibiotics extracted from higher fungi.]—*Bol. Soc. bot. Méx.*, **24**, pp. 1–13, 6 fig., 1959.

In a study of antibiotics extracted from 12 fungi that from *Naematoloma fasciculare* was slightly active against *Nocardia asteroides*, and that from *Lycoperdon perlatum* was slightly active against *Epidermophyton floccosum*, *Microsporum canis*, and *Trichophyton tonsurans*. Most active were *Agaricus placomyces* and *N. fasciculare* against *Cryptococcus neoformans* var. *inocuans*.

1401. Vanbreuseghem (R.) & Della Torre (B.). **Synergie fungistatique et fungicide in vitro et in vivo d'un dérivé chloré du diphénylméthane associé à un détergent.** [Fungistatic and fungicidal synergy *in vitro* and *in vivo* of a chloro derivative of diphenylmethane associated with a detergent.]—*Arch. belges Derm.*, **15**, 1, pp. 64–78, 1959. [Flem., Engl. summ.]

In tests at the Inst. Méd. trop. Prince Léopold, Antwerp, a solution containing 2·67% (w/w) of a surface active substance (lauryl-sodium sulphate and triethanol-

amine) and 0·8% (w/w) of a diphenylmethane compound (5-chloro-2-hydroxydiphenylmethane) was fungistatic at a dilution of 1 in 4,000 to dermatophytes, at 1 in 2,000 to *Cryptococcus neoformans*, at 1 in 1,000 to *Sporotrichum schenckii* and *Phialophora pedrosoi*, at 1 in 400 to *Candida albicans*, at 1 in 200 to *C. tropicalis*, and at 1 in 100 to *Aspergillus fumigatus*, *A. niger*, *Penicillium notatum*, *Scopulariopsis brevicaulis*, and *Geotrichum candidum*. Dermatophytes were destroyed after 5 min. contact, though *A. niger* required 30 min. The product was effective against moniliasis of the nails.

1402. Barr (F. S.). **Tennecetin : a new antifungal antibiotic. Toxicological studies.** —*Antibiot. & Chemother.*, **9**, 7, pp. 406–408, 1959.

In this study from the Res. Dept, S. E. Massengill Co., Bristol, Tenn., the chronic and acute toxicity of tennecetin [**3**, No. 1239] was tested in a wide variety of experimental animals. It was found to be toxic when injected by any route, but non-toxic after oral administration. It may, therefore, be safe for oral or topical use.

1403. Arcamone (F.) & Perego (Mariantonia). **Isolamento e caratterizzazione di un nuovo antibiotico : la etruscomicina.** [Isolation and characteristics of a new antibiotic: etruscomycin.]—*Ann. Chim.*, **49** [? *1958*], pp. 345–351, 2 graphs, 1959.

Studies at the Farmitalia Lab. ric. microbiol. e chemioterapia, Milan, on the physical properties of etruscomycin, a new antibiotic stated to have high antifungal activity, obtained from a new streptomycete, *Streptomyces lucensis* (from soil), are described.

1404. Devignat (R.). **Assistance technique en médecine africaine. Vol. I.** [Technical aid in African medicine. Vol. I.]—166 pp., 18 fig., 1 col. pl., Paris, Masson et Cie, [1959]. 16 N.Fr.

This book is intended to provide the French doctor, working in Africa, with concise accounts of the various microbiological disciplines of concern to him.

Readers of this *Review* will be interested in Chapt. 2 (pp. 5–27), describing techniques used in the examination of material and the determination of pathogens, and Chapt. 7 (pp. 61–68), comprising brief notes on some of the commoner fungal diseases and their control.

1405. Larsh (H. W.). **Modern laboratory methods in the diagnosis of systemic mycoses.**—*Trans. V internat. Congr. on Diseases of the Chest, Tokyo, Sept. 7–11, 1958*, pp. 260–264, 1 graph [? 1959].

Brief descriptions are given of the cultural routines, techniques of staining and polarized microscopy, and the fluorescent antibody methods used for the diagnosis of systemic mycoses at the Kansas City Field Station.

1406. Furcolow (M. L.) & Rubin (H.). **The clinical recognition and treatment of histoplasmosis, blastomycosis and cryptococcosis.**—*Trans. V internat. Congr. on Diseases of the Chest, Tokyo, Sept. 7–11, 1958*, pp. 252–256 [? 1959].

Short accounts of the symptoms in these diseases are accompanied by reports of the effectiveness of amphotericin B in their treatment at the Kansas City Field Station.

1407. Gupta (R. N.) & Shome (S. K.). **Dermatomycoses in Uttar Pradesh. An analysis of 620 cases.**—*J. Indian med. Ass.*, **33**, 2, pp. 39–42, 1959.

The results of a study of 145 cases in the Mahatma Gandhi and Associated Hospitals, Lucknow, revealed a predominance of infection among adults (60·32%),

followed by boys and girls aged 12–20 (33·23), and children (6·45). The most prevalent sp. was *Trichophyton rubrum* (56·73%), the incidence of *T. mentagrophytes*, *Epidermophyton floccosum*, and other spp. being 31·73, 1·92, and 9·6%, respectively. Hygienic precautions are indicated. The following remedies have been found useful: propionic acid powders, mycostatin, triple dye, desofen, and $Na_2S_2O_3.5H_2O$.

1408. Donald (G. F.). **Persistent tinea capitis : with particular reference to pathogenesis, clinical diagnosis and treatment.**—*Clin. Rep. Adelaide Child. Hosp.*, **3**, pp. 119–129, 16 fig., 1959. [18 ref. Addenda 14 ref.]

In Australia tinea capitis has received less attention than elsewhere because in practice 80% of cases respond to a few months of simple medical care [cf. **1**, No. 2504]. *Microsporum canis* is responsible for about 85% of cases, the remaining 15% being endothrix infections of *Trichophyton tonsurans* and, to a lesser extent, *T. violaceum*.

The author reports personal observations on 203 consecutive cases of tinea capitis investigated during 1951–57, considered from the aspects 'Mechanism of infection and disinfection', 'Correlation of mechanism of infection with clinical course', and 'Problems of treatment'. He concludes that greater care must be paid to endothrix infections, 17 cases of which were seen at the Hospital in 18 months. Preliminary results with griseofulvin were encouraging.

1409. Donald (G. F.). **A warning on the frequency of tinea capitis among the aboriginal and part-aboriginal population of South Australia.**—*Med. J. Aust.*, **3**, pp. 435–436, 1959. [3 ref.]

It has not yet proved practicable to conduct a thorough survey of endothrix tinea capitis (*Trichophyton tonsurans* and *T. violaceum*) in the aboriginal population (approx. 5,000) of S. Australia. A preliminary survey, however, of aboriginal children adopted by white foster-parents (3 of 15 infected) or living in hostels (7 of 15 girls; 11 of 16 boys) and homes (12 of 26) indicated a very high incidence of this infection, and the incidence in a few other children, outside the scope of the survey, tended to confirm this. At the Adelaide Children's Hospital all aboriginal children are now suspected as carriers of the infection, until laboratory tests prove that they are not.

1410. Schwarz (J.). **Incidence of dermatophytes in Cincinnati and some diagnostic laboratory procedures.**—*Arch. Derm., Chicago*, **80**, 5, pp. 538–542, 2 fig., 1959.

During 1950–58 96% of *Microsporum* infections of the scalp seen at the Cincinnati General Hosp. were due to *M. audouinii*. *M. canis* infections, which have shown a slight increase, are almost always traceable to kittens. *Trichophyton mentagrophytes* and *T. rubrum* are now of almost equal importance.

1411. Esteves (J.), Brandão (F. N.), Neves (H.), & Da Silva (C.). **Ensaio de integração funcional de serviço hospitalar em actividade dermatomicológica (1945–1958).** [An attempt at functional integration in the dermato-mycological activity of the hospital service (1945–58).]—*Bol. clin. Hosp., Lisbon*, **23**, 2, pp. 307–330, 1959. [Engl. summ.]

Of the 3,716 cases of tinea seen at the Curry Cabral Hosp., Lisbon, during 1945–58 (representing 15% of the total number of dermatological cases), 85·9% were tinea capitis, 3·9% t. corporis, 3·8% t. unguium, 2·5% t. cruris, 2·2% t. pedis, and 1·7% t. barbae.

Of 184 patients receiving local therapy only, 35% were cured. *Trichophyton violaceum* is the most common agent of tinea capitis in Portugal: this infection is seen almost exclusively in children.

1412. Schönfeld (J.). **Mikrosporie-Epidemien durch Mikrosporum canis in Südwestdeutschland.** [Microsporosis epidemics caused by *M. canis* in S.-W. Germany.]—*Z. Haut- u. Geschlechtstr.*, **27**, 10, pp. 300–305, 4 fig., 1959.

From recent observations at the Universitäts-Hautklinik, Heidelberg, it is concluded that outbreaks of infection by *M. canis* [**3**, No. 505] are no longer so rare locally as was hitherto assumed. A case in a 5-yr.-old boy is cited in which infection was contracted from a dog. A Persian cat belonging to the dog's owner was also infected, as was the woman in charge of the animals. The author insists on the importance of co-operation between the doctor and the veterinary surgeon.

1413. Rieth (H.). **Differential-Diagnose der Mikrosporie-Erreger.** [Differential diagnosis of causative agents of microsporia.]—*Mykosen*, **2**, 3, pp. 89–96, 17 fig., 1959. [20 ref.]

The agents of microsporia in Central Europe are stated to be *Microsporon* [*Microsporum*] *audouinii*, *M. canis*, *M. gypseum*, and *Trichophyton* [*M.*] *ferrugineum* (*M. japonicum*). The cultural characteristics of these fungi on Kimmig agar are described, and a key based on their differential growth characteristics on rice is given. *M. audouinii* grows sparsely and imparts a brown colour to the grains. *M. canis* and *M. gypseum* both give luxuriant growth, but are distinguished by their different macroconidia. *M. ferrugineum* appears as a rubbery faviform growth, or, rarely, as a downy white variant, both staining the rice grains bright yellow.

1414. Bereston (E. S.). **Antimycotic cream and powder.**—*Arch. Derm., Chicago*, **80**, 4, pp. 482–483, 1959.

This note, from the Univ. Maryland Sch. Med., Baltimore, describes a cream and powder formulation based on sulphur (Thylox, a fine preparation with particles 1–3 μ) and pelargonic acid [**1**, No. 2533]. Experience over 2 yr., with 281 patients presenting all types of superficial fungus infection, indicates that these formulations are satisfactory for tinea cruris, t. pedis, and t. corporis, particularly where *Trichophyton rubrum* is the agent, but unsatisfactory both for tinea capitis caused by *Microsporum audouinii* and for onychomycosis.

1415. Musso (E.). **Effet de la triamcinolone sur la mycose expérimentale du Cobaye.** [Effect of triamcinolone on experimental mycosis in the Guinea-pig.]—*Dermatologica*, **119**, 2, pp. 75–79, 1959. [Germ., Engl. summ.]

At the Clinique Universitaire de Dermatologie, Geneva, the daily oral administration to guinea-pigs inoculated with *Achorion* [*Trichophyton*] *quinckeanum* of 2 mg. triamcinolone (Ledercort) failed to influence in any way the course of either primary infection or reinfection.

1416. Herpay (Z.). **Beitrag zur Chemotherapie der Dermatomykosen. (Übersicht und eigene Untersuchungen).** [Contribution to the chemotherapy of the dermatomycoses. (Survey and personal investigations).]—*Z. Haut- u. Geschl.-Kr.*, **27**, 12, pp. 373–379, 4 fig., 1959.

Following a discussion of 'modern' antimycotics, grouped according to their chemical composition, the writer reports on his experiences at the Univ. Skin Clinic, Debrecen, Hungary, in the treatment of superficial infections with a mixture of 2% 8-oxyquinoline and 1% *p*-aminobenzoic acid butyl ester, applied locally at least twice daily at 2–3-day intervals either as a liquid, ointment, or powder. Of

150 patients 79 (52·6%) were completely cured and 54 (36) temporarily improved. *Candida* spp. were isolated on Sabouraud's maltose agar in 18 cases, *Trichophyton* spp. in 19, *T. rubrum* in 6, and *Epidermophyton* Kaufmann-Wolf [*T. interdigitale*] in 17.

1417. Schultz (H. W.) & Wiese (G. A.). **The synthesis of some derivatives of cinnamic acid and their antifungal action.**—*J. Amer. pharm. Ass., Sci. Fd.*, **48**, 12, pp. 750–752, 1959.

This information has been noticed [**3**, No. 1235].

1418. Blank (I. H.) & Gould (Edith). **Penetration of anionic surfactants (surface active agents) into skin. I. Penetration of sodium laurate and sodium dodecyl sulfate into excised human skin.**—*J. invest. Derm.*, **33**, 6, pp. 327–335 (discussion pp. 335–336), 2 fig., 1959.

At the Dermatological Res. Lab., Harvard med. Sch., Massachussetts General Hosp., Boston, sodium laurate, in weak, unbuffered, mildly alkaline, aqueous solution, penetrated the epidermis and dermis of excised human skin. Under like circumstances sodium dodecyl sulphate appeared to penetrate only in very small quantities below the barrier of normal undamaged skin, and was for the most part retained in the stratum corneum. In buffered solutions at pH $>$ 10·5 both surfactants penetrated into the dermis, indicating that at this alkalinity the natural barrier is damaged.

1419. Blaschke-Hellmessen (R.). **Über die antagonistische Wirkung aerober Sporenbildner gegenüber pathogenen Hautpilzen.** [On the antagonistic effect of aerobic spore-formers on pathogenic dermatophytes.] –*Arch. Mikrobiol.*, **32**, 4, pp. 393–408, 8 fig., 1959.

At the Institut für technische Hygiene und Mikrobiologie, Technische Hochschule, Dresden, 200 spore-forming bacteria were isolated from the air and soil samples. Of these 112 (56%) were antagonistic to *Trichophyton mentagrophytes*, 130 (65%) to *T. rubrum*, and 100 (50%) to *Microsporum canis* on Sabouraud dextrose agar. *Bacillus subtilis* exhibited particularly strong antimycotic activity. The significance of the high proportion of the soil bacteria antagonistic to these fungi is discussed in relation to its bearing on the survival of dermatophytes as soil saprophytes. The active antimycotic principle is demonstrated in 16–18-day bacterial cultures at 37° C., and is probably a breakdown product. In more detailed studies of *B. subtilis* it was found to be produced in media to which yeast extract and 4% dextrose were added, and to be relatively insensitive to pH in the range 5–9, and to temp. of 4–100° C. It was active against *T. tonsurans* and *Epidermophyton floccosum*, in addition to the dermatophytes mentioned, but inactive against *Candida albicans*. Addition of inactivated serum to the test medium increased the anti-mycotic activity.

1420. Heite (H.-J.) & Janke (D.). **Griseofulvin.**—*Dtsch. med. Wschr.*, **84**, 49, pp. 2202–2206, 1 fig., 1959. [58 ref.]

This is a general review from the Dermatologische Klinik der Phillipps-Universität, Marburg/Lahn, of the present state of research into griseofulvin [**3**, No. 1274–1284 and below].

1421. Roth (F. J.), Sallman (B.), & Blank (H.). **In vitro studies of the antifungal antibiotic griseofulvin.**—*J. invest. Derm.*, **33**, 6, pp. 403–418, 8 fig., 1959.

When 13 dermatophytes (*Epidermophyton floccosum*, 3 *Microsporum* spp., and 9 *Trichophyton* spp.) were exposed *in vitro* to griseofulvin at the Univ. Miami Sch.

Med., Fla, high levels completely arrested growth, while low levels gave rise to bizarre abnormalities of hyphal structure (which are illustrated). The fungi were able to withstand prolonged exposure to high conc. without loss of viability. The antibiotic showed no significant activity against a range of systemic fungal pathogens. Intraperitoneal injection of griseofulvin into mice experimentally infected with *Candida albicans* did not enhance the severity of the infection. All tested spp. of non-pathogenic ascosporogenous and imperfect yeasts and yeast-like fungi were completely resistant to high conc. The antibiotic exerted a slight but consistent inhibitory effect on the respiration of intact cells of *T. rubrum*. The presence of serum reduced its activity as measured by bioassay. The direct assay of body fluids was generally unsatisfactory owing to the low levels of antibiotic present, and the action of interfering substances.

An attempt to induce resistance in *T. rubrum* by subculturing in gradually increasing conc. of the antibiotic over a prolonged period was not successful.

1422. Rosenthal (S. A.), Goldfarb (N.), & Baer (R. L.). **Therapeutic and preventive effects of griseofulvin in Guinea-Pigs.**—*J. invest. Derm.*, **33**, 6, pp. 419–426, 8 fig., 1959.

At the Dept of Dermatology and Syphilology, New York Univ. Post-Graduate med. Sch., guinea-pigs were inoculated with *Microsporum canis* by placing infected hairs on a scarified site on the flank. After 10–14 days, when infection was established, some were force fed (5 times weekly) with griseofulvin at various levels, while others were left as controls. Dosages of 75 mg./kg./week or more accelerated clinical cure. In treated animals the fungus disappeared rapidly from infected hairs and hair follicles, but was still present at a reduced level in the horny layer 8 days after the beginning of treatment.

When griseofulvin therapy [cf. **3**, No. 986] was started simultaneously with inoculation, 50 mg./kg./week was the min. dose sufficing to prevent infection. The protective effect of the antibiotic was lost 3 days after discontinuation of treatment. [A discussion of this and the previous paper appears on pp. 425–426.]

1423. Frey (J. R.) & Geleick (H.). **Zur Wirkung von Griseofulvin auf die experimentelle Trichophytie des Meerschweinchens.** [On the influence of griseofulvin on experimental trichophytosis of the Guinea-pig.]—*Dermatologica, Basel*, **119**, 3, pp. 132–148, 1 fig., 1 graph, 1959. [Engl., Fr. summ. 23 ref.]

In tests by Hoffmann-La Roche & Co., Ltd., Basle, the oral administration of griseofulvin materially alleviated the symptoms of infection by *Trichophyton mentagrophytes* in guinea-pigs and considerably reduced the fungus-positive phase. Administered prophylactically, the drug completely suppressed infection. The periodical examination of hairs from the mycotic foci revealed 3–4 times fewer infected in the treated animals than in the controls as early as 4 days after the inception of treatment (7 after inoculation).

Griseofulvin appears to act primarily on the peripilar and intracortical hyphae situated near the hair root. In this way their proximal development is arrested and through the distal growth of the hair they are displaced towards the shaft. Presumably the antibiotic is deposited in the cells of the hair matrix, shaft, and inner root, acting on the fungal elements which proliferate and maintain infection in those sites.

1424. Robinson (H. M.), Robinson (R. C. V.), Bereston (E. S.), Manchey (L. L.), & Bell (F. K.). **Griseofulvin, clinical and experimental studies.**—*Arch. Derm., Chicago*, **81**, 1, pp. 66–76, 8 fig., 2 graphs, 1960. [Abs. of discussion, pp. 76–80.]

The clinical results, mostly successful, obtained at the Univ. Maryland Sch. Med.

by treating tinea capitis (53 patients), onychomycosis (24), tinea cruris (5), and tinea corporis (14), variously associated with *Microsporum audouinii*, *M. canis*, *Trichophyton rubrum*, *T. mentagrophytes*, and *Epidermophyton floccosum*, are tabulated and discussed. Blood levels, as estimated by spectrophotometric examination [**3**, No. 1275], using butyl acetate as the extractant, were very low (0·3–0·5 μg./ml.), and as xanthines, caffeine, and theophylline have optical absorption properties close to those of the antibiotic the possible influence of ingestion of beverages containing such substances on griseofulvin determinations was studied. In one normal man, strong tea supplemented by citrated caffeine resulted in a plasma reading corresponding to 3 μg./ml. griseofulvin.

From experiments in which fungi on Sabouraud's agar were exposed to increasing levels of griseofulvin it is tentatively concluded that resistant strains of *T. mentagrophytes*, *M. canis*, and *M. audouinii* can be raised *in vitro*. Results with *T. rubrum* were too erratic to permit any conclusion.

1425. Pardo-Castelló (V.), Trespalacios (F.), Fariñas (P.) & Fernández-Baquero (G.). **El tratamiento de las micosis superficiales de la piel con griseofulvin.** [The treatment with griseofulvin of the superficial mycoses of the skin.]—*Bol. Soc. cubana Derm. Sif.*, **16,** 1, pp. 1–11, 1959. [Engl. summ. *B.H.*, **34**, p. 1004.]

In studies at the Hosp. Calixto García, Havana, Cuba, on the fungistatic activity of griseofulvin 125 μg./ml. inhibited the growth of *Sporotrichum schenckii*, *Cladosporium trichoides*, *Trichophyton mentagrophytes*, and *Epidermophyton floccosum* on Sabouraud glucose agar. Local applications of the antibiotic produced only a temporary relief in some cases due to dermatophytes. Oral treatment was used for 37 patients given daily doses of 500 to 2,000 mg. No untoward effects were recorded and treatment against dermatophyte infections was successful.

Two cases of chromoblastomycosis were also treated with griseofulvin without success.

1426. Buckley (D. B.). **Griseofulvin in the treatment of Cattle ringworm in Humans.**—*J. Irish med. Ass.*, **46**, 271, pp. 24–25, 1960.

Entirely successful results are reported in the treatment of 11 cases of infection by *Trichophyton discoides* [*T. verrucosum*] in patients aged from 17 months to 70 yr. at the South Infirmary, Cork, Republic of Ireland.

1427. Degus (R.), Rivalier (E.), & Lefort (P.). **La griséofulvine dans le traitement des teignes.** [Griseofulvin in the treatment of tineas.]—*Bull. Soc. Derm. Syph., Paris, 1959*, 3, pp. 281–288, 1959.

Of 34 patients treated at the Hôpital Saint-Louis, Paris, with griseofulvin *per os* at 1 g./day, 23 have been completely cured, viz. 5 infected by *Achorion* [*Trichophyton*] *schoenleinii*, 5 *T. violaceum*, 2 *T. v. glabrum* [*T. glabrum*], 1 each *T. acuminatum* and *T. soudanense*, 6 *Microsporum audouinii*, and 3 *M. canis*.

1428. Esteves (J.) & Neves (H.). **Griseofulvin. Therapeutic results in different dermatomycoses after 22 weeks of treatment. Effect on experimental dermatomycosis in Man.**—*Dermatologica, Basel*, **119**, 3, pp. 148–158, 1959. [Germ., Fr. summ. 11 ref.]

At the Curry Cabral Hosp., Lisbon, griseofulvin [**3**, No. 1120] was administered *per os* at 0·5–2 g./day to 25 patients (19 children, 6 adults). Of 15 children with tinea capitis, 11 (*Trichophyton violaceum* 7, *T. tonsurans* 3, *Microsporum canis* 1) were cured after 3–5 weeks; in the remaining 4 children new lesions developed within several weeks after all the symptoms had vanished, possibly owing to a fresh

infection. Four other children suffering from favus of the scalp (*T. schoenleinii*) [loc. cit.] were cured within 5 weeks. Lesions in 4 adults due to chronic tinea corporis (*T. violaceum* and *T. megninii*) [loc. cit.] were healed within 4–6 weeks, but 2 relapsed after 22 weeks' and 1 case after 7 weeks' treatment. Tinea of the nails (*T. violaceum* 5, *T. tonsurans* 1, *T. megninii* 1) was cured or greatly improved in slightly affected patients within 7–16 weeks, but deep destructive lesions did not change appreciably after 22 weeks. Test inoculations of *T. violaceum*, *M. canis*, and *T. mentagrophytes* on glabrous skin were positive in patients treated with griseofulvin and untreated patients alike.

1429. Grin (E. I.). **Nova terapija dermatofitija vlasišta oralnom upotrebom griseofulvina i mehanizam njegovog djelovanja.** [New therapy of the ringworm of the scalp by a *per os* administration of griseofulvin and the mechanism of its effectiveness.]—*Vojno-sanit. Pregl.*, *1959*, **10**, pp. 771–780, 15 fig., 1 diag., 1959. [Engl., Fr. summ.; 12 ref.]

Treatment of 39 patients at the Inst. of Dermatology and Venerology, Sarajevo, Yugoslavia, showed that griseofulvin at 1 g. day was effective against *Trichophyton violaceum* [3. No. 1137] and *T. schoenleinii* infections which were mostly eliminated in 3–5 weeks. Haircuts at the beginning of and during the treatment supplemented by frequent baths containing fungicides are recommended. Inflammatory infections (*T. verrucosum*, *T. mentagrophytes*), however, did not respond to griseofulvin and it even entailed increased suppuration from the lesions after the initial administration.

1430. Birt (A. R.), Hoogstraten (J.), & Norris (M.). **Griseofulvin in the oral treatment of tinea capitis.**—*Canad. med. Ass. J.*, **81**, 3, pp. 165–167, 2 fig., 1959. [Fr. summ.]

Clinical trials involving 7 boys are reported from the Winnipeg Children's Hosp. In 2 cases of infection by *Microsporum audouinii* there was a very speedy response, but no material shortening of the disease process occurred in the 2 of *M. canis* associated with follicular pustules, which also developed in the 1 case of tinea corporis (*Trichophyton mentagrophytes*). In the 2 patients infected by *M. canis* without pustules griseofulvin was quickly effective.

1431. Wrong (N. M.), Rosset (M.), Hudson (A. L.), & Rogers (A. S.). **Griseofulvin in the treatment of superficial fungous infections.**—*Canad. med. Ass. J.*, **81**, 3, pp. 167–173, 2 fig., 1959. [Fr. summ.]

Reports are presented of the 1st 10 cases treated in the Toronto area. All 7 due to *Trichophyton rubrum* reacted by an extremely marked improvement but in none could the cure be considered permanent: in 1 patient, for instance, the fungus developed in skin cultures after 5 months therapy, while in another it was viable in the toe-nails after 4½ months. A case of tinea capitis caused by *Microsporum audouinii* was rapidly cured, but in another due to *M. canis* a period of 8 weeks was required to eliminate the fungus. Griseofulvin was also very effective in the case of a 38-yr.-old woman suffering from extensive follicular lesions caused by an unidentified fungus: her 2 boys were under treatment for kerion of the scalp and their cattle for ringworm. A 65-yr.-old man developed infection by *Candida albicans* in areas formerly occupied by *T. rubrum* but the condition was successfully treated with nystatin [mycostatin].

1432. Flint (Anna), Forsey (R. R.), & Usher (B.). **Griseofulvin, a new oral antibiotic for the treatment of fungous infections of the skin.**—*Canad. med. Ass. J.*, **81**, 3, pp. 173–175, 1 fig., 1959. [Fr. summ.]

From clinical trials at the Montreal General Hosp. the authors conclude that

griseofulvin is particularly valuable in the therapy of refractory cases of nail infection, especially those due to *Trichophyton rubrum* (4 in this series.) The same sp. in the feet of a 58-yr.-old woman required 2 months therapy, while a 44-yr.-old man with an acute, vesicular eruption of the soles induced by *T. mentagrophytes* was still under treatment after 6 weeks.

Infection caused by *Microsporum canis* was quickly eliminated from the scalps of 3 children.

1433. Stewart (W. D.), Kanee (B.), Danto (J. L.), & Maddin (S. W.). **Griseofulvin : a clinical report. The effect of griseofulvin on some superficial fungal infections and upon the cultures taken from these infections.**—*Canad. med. Ass. J.*, **81**, 9, pp. 726–731, 3 fig., 7 graphs, 1959. [Fr. summ.]

Of 7 cases involving the skin, hair, and nails in Vancouver, B.C., which were treated orally at dosages of 1–2·5 g. daily for 6–26 weeks, 6 responded satisfactorily, while 1 must be regarded as a clinical failure despite negative cultures. The agents were *Trichophyton rubrum* in 4 cases, *T. gypseum* [*T. mentagrophytes*] in 1, and *Microsporum canis* in 2.

1434. Grandbois (J.) & Potvin (A.). **La griséofulvine dans les mycoses superficielles.** [Griseofulvin in superficial mycoses.]—*Laval méd.*, **28**, 4, pp. 476–491, 10 fig., 1959. [18 ref.]

At the Hôtel-Dieu, Quebec, in 6 cases of tinea (5 due to *Microsporum canis*) a cure was effected in 49–74 days, in 2 of 4 of interdigital and plantar epidermophytosis there was a great improvement after 15–21 days, and in 1 of onychomycosis relief was experienced after 6 weeks.

1435. González-Ochoa (A.) & Ahumada-Padilla (M.). **El griseofulvin en el tratamiento de las dermatofitosis.** [The treatment of dermatomycoses with griseofulvin.]—*Pren. méd. mex.*, **24**, 5, pp. 189–195, 1959.

With a daily oral dose of 1 g. in adults (about 0·5 g. for children) 9 cases of tinea capitis due to *Trichophyton tonsurans* and *Microsporum canis* were cured in 2–4 weeks. Infections of the glabrous skin were cured in 2–8 weeks and 8 cases of tinea unguis in 4–12 weeks. A relapse occurred in a case of tinea corporis due to *T. rubrum*. Pruritis and headache were recorded as side-effects.

1436. Degos (R.), Rivalier (E.), & Lefort (P.). **La griséofulvine dans le traitement des teignes.** [Griseofulvin in the treatment of ringworm.]—*Algérie méd.*, **63**, 5, p. 551, 1959.

This note records the successful use in N. Africa of orally administered griseofulvin in the treatment of *Achorion* [*Trichophyton*] *schoenleinii*, *T. violaceum*, *T. acuminatum* [*sabouraudii*], *T. soudanense*, *T. rubrum*, *Microsporum audouinii*, and *M. canis* infections.

1437. Hadida (E.) & Schousboe (A.). **Traitement des teignes par la griséofulvine.** [Treatment of ringworm with griseofulvin.]—*Algérie méd.*, **63**, 9, pp. 813–819, 1959.

The authors describe the use of griseofulvin in 53 cases of ringworm at the Clinique de Dermatologie d'Alger. A 19-yr.-old boy who had had a generalized infection of *Trichophyton verrucosum* for 8 yr. (including involvement of the nails, subcutaneous nodules, and cervical adenitis) which progressively worsened despite treatment, was cured in 5 months. His sister, who also had a widespread infection, responded equally dramatically. A 20-yr.-old woman with *T. violaceum* infection of the scalp since the age of 3, was cured after 4 months' treatment. The remaining 50 cases had

Achorion [*T. schoenleinii*] infections of the scalp, some of long standing: all were cured within 1 month.

1438. Latapí (F.), Lavalle (P.), Novales (Josefa), & Ortiz (Yolanda). **Griseofulvin en micosis cutáneas profundas.** [Griseofulvin in deep cutaneous mycoses.] —*Dermatología* (*Méx.*), **3**, 1, pp. 34–41, 8 fig., 1959. [Fr., Engl. summ.]

This is a preliminary report from the Centro Dermatológico Pascua, Mexico City, of clinical improvement following the treatment of mycetoma (*Nocardia brasiliensis*) of the foot in a 19-yr.-old man, and of facial sporotrichosis (*Sporotrichum schenckii*) in a 7-yr.-old girl, with griseofulvin (2 g./day). No final conclusions can yet be drawn.

1439. Seale (E. R.) & Richardson (J. B.). **Trichophyton tonsurans : a follow up of treated and untreated cases.**—*Arch. Derm., Chicago*, **81**, 1, pp. 87–91, 4 fig., 1960. [Abs. of discussion, pp. 91–94.]

Tinea capitis caused by *T. tonsurans* is becoming increasingly prevalent in the United States, and in certain areas, including Texas [**1**, No. 1749], its incidence is of major importance.

Of 101 cases observed over an 11-yr. period in a private practice in Houston, Texas, 83 were in children, 6 in adolescents, and 11 in adults. Twenty-nine showed some degree of inflammation, while 72 were non-inflammatory: all of the former are now well. Of 52 in the non-inflammatory group, treated by roentgen epilation, 43 needed more than one epilation. Of 16 patients under 18 yr., in the non-inflammatory group, 12 recovered spontaneously, while 5 women in the same group failed to respond to prolonged topical treatment. From the findings it appeared that practically all males, and most females, develop a natural resistance to the fungus. An occasional female fails to develop this resistance, and contracts the disease when adult.

1440. Beirana (L.) & Novales (J.). **Tiña universal y granulomatosa por Trichophyton tonsurans.** [Generalized granulomatous tinea caused by *T. tonsurans*.] —*Dermatología* (*Méx.*), **3**, 1, pp. 4–16, 11 fig., 1959. [Engl. summ.]

The case here described from the Servicio de Dermatología, Hosp. General, Mexico City, was in a 7-yr.-old girl, who had acquired the infection shortly after birth from her family, 4 of whom had superficial infections. Potassium iodide therapy (3 g. daily) led to cicatrization of the granulomatous lesions within 2 months, after which the treatment was suspended as a result of iodism, and relapse followed.

1441. Aravijsky (A. N.). **Rare mycological findings in pathological material.**—*Mycopathologia*, **11**, 1–2, pp. 143–154, 14 fig., 1959.

A teen-age girl admitted to the Dept of Dermatology, 1st I. P. Pavlov med. Inst., Leningrad, had developed osteomyelitis in 3 toes of the right foot as a result of a pitch-fork wound of the base of the 3rd toe. *Trichophyton crateriforme* was isolated from the bone lesions and from the suppurating right femoral lymph node. The presence of mycelium of the fungus in squamae from the face and body, in hairs, and in both finger- and toe-nails, indicated chronic trichophytia, which condition was also found in her brother. Mention is made of Chernogubov's descriptions (1926, Moscow [no ref.]) of similar lesions of the sternum and ribs in an adult female patient who, with other members of her family, exhibited chronic trichophytia (*Trichophyton violaceum*).

1442. Vanbreuseghem (R.). **Trichophytie familiale à Trichophyton rubrum respectant le père de famille.** [Family trichophytosis due to *T. rubrum*, with

respect to the father.]—*Arch. belges Derm.*, **15**, 1, pp. 81–83, 1959. [Fr., Flem., Engl. summ.]

In a family [in Belgium] of 4 persons, the mother and the 2 sons (26 and 18 yr., respectively, in 1951, when the author made his 1st examination of all 3) have for many years suffered from infection of the skin and nails by *T. rubrum*. The father, examined in 1958, showed a sub-clinical infection of *Ctenomyces interdigitalis* [*T. interdigitale*] in the right foot. It is thought possible that some hereditary factor of resistance or of sensitivity to epidermomycoses may explain these facts.

1443. Götz (H.). **Relaciones entre el Trichophyton mentagrophytes y el Trichophyton rubrum.** [Relationships between *T. mentagrophytes* and *T. rubrum*.]—*Dermatología (Méx.)*, **3**, 1, pp. 17–24, 1959. [Fr., Engl. summ.]

At the Dermatological Clinic and Polyclinic, Univ. Munich, 46 patients with lesions of the hands and feet, who had been mycologically examined in 1951–2, were examined again in 1956–7. The findings for lesions at the sites of infection are tabulated. In 75% of these cases the fungus originally present had persisted. Of 19 cases originally positive for *T. mentagrophytes* 6 were positive for *T. rubrum* at the 2nd examination, the original infection persisting in the remainder. The author considers that *T. rubrum* may be a variant of *T. mentagrophytes*, occurring in the parasitic phase but not on culture media [cf. **2**, No. 2294].

1444. Nelson (L. M.) & McNiece (K. J.). **Recurrent Cushing's syndrome with Trichophyton rubrum infection.**—*Arch. Derm., Chicago*, **80**, 6, pp. 700–704, 2 graphs, 1959.

The case here reported [see below] from the Sansum Medical Clinic, Santa Barbara, Calif., was of *T. rubrum* infection in a 30-yr.-old white man. Mycelium was present in erythematous patches on the skin of the arms, hands, legs, feet, and groin, and in the thickened, friable nails of the fingers and toes, and the fungus was isolated. On 2 occasions spread of the fungal infection was one of the early symptoms of overactivity of the adrenal cortex [cf. **3**, No. 568]. When corticosteroid levels returned to normal the fungal infection promptly subsided to a minimal involvement of the nails and adjacent skin.

1445. Canizares (O.), Shatin (H.), & Kellert (A. J.). **Cushing's syndrome and dermatomycosis.**—*Arch. Derm., Chicago*, **80**, 6, pp. 705–709, 1959.

At the Dermatology Section, Medical Service, Veterans Administration Hosp., Bronx, New York, 3 cases of widespread dermatomycosis (*Trichophyton rubrum*) were observed among 8 cases of Cushing's syndrome [see above].

Two of the patients in question were young men with unexplained hypertension, associated in the 1st with extensive tinea corporis of 4 yr. standing, and in the 2nd with widespread dermatomycosis of at least 2 yr. standing, before Cushing's syndrome was diagnosed. These cases indicate the diagnostic value of unexplained hypertension associated with generalized dermatomycosis, especially when the latter occurs in an area where extensive tinea is uncommon. Whenever extensive tinea occurs in an area where it is normally rare, the possibility of a severe systemic disease should be considered. [A discussion of this and the previous paper appears on pp. 709–712.]

1446. La Touche (C. J.). **Mouse favus due to Trichophyton quinckeanum (Zopf) Macleod & Muende : a reappraisal in the light of recent investigations. Parts I, II, & III.**—*Mycopathologia*, 11, 4, pp. 257–286, 15 fig., 1959.

The literature is briefly reviewed [cf. **3**, No. 237]. Clinical details are given of cases in man and kittens, seen at the General Infirmary, Leeds, Yorks. Experimental

inoculations of kittens and mice were performed with native material and with cultures, while in the case of guinea-pigs cultures alone were used: the results indicated that, on the whole, all strains examined were capable of infecting all these animals, which all responded to primary infection by forming a scutulum. In guinea-pigs this structure, in an incipient stage of development, was, however, masked by excessive inflammatory reaction. The fungus penetrates hair during its parasitic growth, and the affected hair fluoresces under Wood's light. Re-inoculation of previously infected kittens gave rise to abortive lesions without scutula, the inflammatory response being of short duration.

Necropsy specimens from scutulum-bearing lesions in a kitten spontaneously infected with *T. quinckeanum* were stained by P.A.S., Sacpic, and haematoxylin. The fungus, confined to the stratum corneum, was capable of invading the hair shaft and the inner follicle sheath, and of producing arthrospores both within the hair shaft and on its outer surface. The main inflammatory response to invasion was a massive infiltration of the dermal and epidermal tissues by serous exudate and polymorphonuclear leucocytes: other features included the undermining of the scutulum by pools of pus, the formation of discrete perifollicular microabscesses in the dermis, the engorgement of capillaries, oedema, and parakeratosis. Similar features were seen in mouse lesions, removed at necropsy.

1447. Pereiro Miguens (M.). **Algunos datos sobre la fisiología del T. quinckeanum.** [Some data on the physiology of *T. quinckeanum*.]—*Act. dermo-sifiliogr., Madrid*, **50**, 3, pp. 131–135, 1959. [18 ref.]

At the Facultad de Medicina, Santiago de Compostela, Spain, vitamin B_6 ('at a dilution similar to that proposed by Georg' [**2**, No. 171]) slightly inhibited the growth of *T. quinckeanum*, *T. rubrum*, and pleomorphic cultures of *T. mentagrophytes*, on a basal medium+10% glucose. The *T. mentagrophytes* made more vigorous growth on all media than the others. *T. rubrum* was slightly inhibited by vitamin C, and *T. quinckeanum* and *T. mentagrophytes* by folic acid. None of these vitamins was indispensable for the growth of these fungi.

1448. Ito (K.), Rieth (H.), & Schirren (C.). **Beziehungen zwischen humanen und animalen Dermatomykosen. I. Trichophytie durch Infektion von Kühen bei geburtshilflicher Tätigkeit.** [Relationships between human and animal dermatomycoses. I. Trichophytosis contracted from cows during calving work.]—*Bull. pharm. Res. Inst., Osaka*, 17, pp. 18–22, 10 fig., 1958.

A *Trichophyton verrucosum* infection of the skin and hair of the right forearm of a veterinary surgeon is described. The same infection was found in several cows under his care. Culture from affected hairs was facilitated by washing the detached hairs in penicillin–streptomycin solution before plating on a medium enriched with thiamine.

1449. Strauss (J. S.). **An epidemic of human ringworm due to Trichophyton verrucosum.**—*New Engl. J. Med.*, **261**, 7, pp. 331–333, 2 fig., 1959. [13 ref.]

The outbreak herein reported involved at least 16 boys among a group of 50 inmates of a school for mental defectives near Templeton, Mass., where all but 1 were employed in the care of a dairy herd.

1450. Rieth (H.). **Gibt es in der Natur sexuelle Formen der hautpathogenen Pilze?** [Do sexual forms of pathogenic dermatophytes occur in nature?]—*Hautarzt*, **10**, 4, pp. 161–164, 5 fig., 1959. [29 ref.]

At the Universitäts-Hautklinik, Hamburg-Eppendorf, in autumn 1956, *Trichophyton gallinae* was inoculated onto cock's combs in experiments on the evaluation of antimycotics [cf. **2**, No. 1089], and could in every case be re-isolated. The infec-

tion subsequently spread to other cocks and hens kept with the inoculated ones. When the scaly lesions on these birds was examined in autumn 1957, agar slant cultures yielded a perfect fungus with reddish-grey cleistothecia (0·5 mm. diam.) having plectenchymatous walls and containing 8-spored asci with invisible walls. When the cleistothecia were mature the ascal walls had already broken down to release the spores. In all cultures hyaline, round-oval, imperfect spores (microconidia) were present, often in great numbers, usually arising along the hyphae, though sometimes 'grape-shaped' ones arose on short conidiophores. These microconidia were in general almost as big as the 8-spored asci. The fungus has not yet been identified. Cultures are available.

1451. Rieth (H.) & El-Fiki (A. Y.). **Spontane Trichophytie bei Tierversuchen mit Mikrosporie-Erregern.** [Spontaneous trichophytia occurring during the course of animal experiments with agents of microsporia.]—*Z. Haut- u. Geschl.-Kr.*, **26**, 2, pp. 52–58, 1959.

In the course of a study, at the Universitäts-Hautklinik, Hamburg-Eppendorf, of experimental *Microsporum* infections in mice and guinea-pigs, a guinea-pig was found to have developed, at one site, the experimental *M. canis* infection and a spontaneous *Trichophyton mentagrophytes* infection.

1452. Kaffka (A.) & Rieth (H.). **Trichophyton mentagrophytes — Varianten bei Laboratoriumstieren.** [*T. mentagrophytes* variants in laboratory Animals.]—*Zbl. Bakt.*, Abt. 1 (*Orig.*), **177**, 1, pp. 96–106, 9 fig., 1960. [Engl., Fr., Span., Russ. summ.]

Of 4 variants isolated from rabbits and guinea-pigs during an outbreak of dermatomycosis in which a female laboratory assistant contracted infection at the Universitäts-Hautklinik, Hamburg-Eppendorf, 3 were identical in their macroscopic characters but differed microscopically. In (1) masses of circular to pyriform microconidia were formed in clusters and along the hyphae. Spirals, racquet hyphae, and chlamydospores were also numerous but very few macroconidia developed. In (2), on the other hand, macroconidia (90×10–$15\,\mu$), occurring in fascicles of up to 15, were remarkably abundant, together with clusters of microconidia. In (3) microconidia were formed almost exclusively along the hyphae and were mostly of the pyriform aleurio type. In (4) practically the entire culture consisted of sterile hyphae, with very sparse microconidial production in scattered areas and chlamydospores and racquet hyphae in the agar. This variant also contrasted in its downy, pure white growth with the yellowish-white of the 3 other forms.

1453. Rieth (H.), Koch (H.), & El-Fiki (A. Y.). **Zum Nachweis hautpathogener Pilze in Laboratoriums-Tierställen.** [On the demonstration of pathogenic dermatophytes in the cages of laboratory animals.]—*Arch. klin. exp. Derm.*, **209**, pp. 258–268, 11 fig., 1959. [33 ref.]

At the Universitäts-Hautklinik, Hamburg-Eppendorf, baits consisting of tufts of human and animal hair tied with string were placed among the litter in rabbit and guinea-pig cages. The trapped fungi included *Microsporum canis*, *Cephalosporium acremonium*, *Scopulariopsis brevicaulis*, and *Streptomyces griseus*. A strain of *Hormodendrum* [*Phialophora*] *pedrosoi*, from a Finnish case of chromoblastomycosis, grew in its typical saprophytic form on baits of cat hair.

1454. Bánhegyi (J.). **Occurrence of Microsporum gypseum and Keratinomyces ajelloi in Hungarian Soil.**—*Ann. Univ. Sci. Budapest. Rolando Eötvös nom.*, **2**, pp. 37–42, 2 fig., 1959. [Russ. summ. 23 ref.]

When 78 diverse soil samples were examined for dermatophytes at the Micro-

biological Inst., Eötvös Loránd Univ., Budapest, by the Vanbreuseghem hair-bait method [1, No. 2544], *M. gypseum* was isolated from 6 (from stables and farmyards, exclusively) and *K. ajelloi* from 1 (from the floor of a cave colonized by bats).

1455. Randhawa (H. S.), Nath (A.), & Viswanathan (R.). **Isolation of Microsporum gypseum (Bodin) Guiart & Grigorakis from soil in Delhi.**—*Sci. & Cult.*, **25**, 5, pp. 326–327, 2 fig., 1959.

Of 10 soil samples examined at the Patel Chest Inst., Univ. Delhi, India, for *M. gypseum*, by a hair-bait technique, 4 (1 from the outlet of a rat burrow, 3 from near a fowl pen) were positive for the fungus, which was isolated on Sabouraud's agar [cf. **3**, No. 29].

1456. Capretti (C.). **Microsporum gypseum, dermatofito geofílico. Comprobación de su presencia en muestras de suelo recogidas en la ciudad de Merida.** [*M. gypseum*, a geophilic fungus. Verification of its presence in soil samples collected in the city of Merida.]—Reprinted from *Rev. Fac. Farm. Univ. Los Andes, Venezuela*, 2–3, 1959, 10 pp.

Of 50 samples 29 were positive. The fungus appeared to be particularly associated with soil near to human habitations.

1457. Bhattacharyya (K. C.), Ray (H. N.), & Banerjee (A. K.). **Demonstration of lipase and succinic dehydrogenase activity in some dermatophytes and affected skin.**—*Bull. Calcutta Sch. trop. Med.*, **7**, 1, pp. 9–11, 1959.

In earlier papers (op. cit., **6**, pp. 10, 64, 1958) the authors reported alkaline phosphatase, Fe, Ca, and lipids in *Trichophyton rubrum*.

In the present study lipase activity was demonstrated in cultures of *T. rubrum* and *Microsporum gypseum* on Sabouraud dextrose agar, and to a lesser extent on other media, by a modification of Gomori's tween method (cf. A. G. E. Pearse, *Histochemistry*, 1953). The activity was more pronounced at the centre of the culture. The distribution of the enzyme in the hyphae and macroconidia is discussed. Succinic dehydrogenase was demonstrated in both hyphae and macroconidia by the blue tetrazolium method of Seligman, Rutenberg, & Wolman (cf. R. D. Lillie, *Histopathologic technique and practical histochemistry*, 1954). No lipase was present in normal or infected skin biopsy samples. The infected samples had a higher content of succinic dehydrogenase than the controls.

1458. Ito (K.). **Experimental fungus granuloma as seen from comparative exanthematology.**—*Mycopathologia*, **12**, 1, pp. 67–76, 8 fig., 1 graph, 1959.

A similar review of the author's work at the Dept of Dermatology, Gifu med. Coll., Gifu-City, Japan, has already been noticed [**3**, No. 1291].

1459. Vanbreuseghem (R.). **Pityriasis versicolor du dos, des bras, des genoux et du cuir chevelu.** [Pityriasis versicolor affecting the back, arms, knees, and scalp.] —*Arch. belges Derm.*, **15**, 1, pp. 84–86, 1959. [Fr., Flem., Engl. summ.]

Description of a case (examined in Belgium) of pityriasis versicolor (*Malassezia furfur*) in a white woman aged 30 yr. who had returned 4 months previously from the Belgian Congo, where she had resided for 6 yr. The 1st symptoms had appeared 1 yr. before the examination. In addition to the usual sites of infection, the scalp was slightly affected. Infection of the scalp would appear to be less rare than it has been thought to be [cf. **3**, No. 667].

1460. Lurie (H. I.) & Borok (R.). **Tinea nigra (tinea nigra palmaris, keratomycosis nigricans palmaris). A review of the literature and report of the first case in South Africa.**—*S. Afr. J. med. Sci.*, **23**, 3–4, pp. 201–204, 5 fig., 1958. [22 ref.]

Cultures of a fungus isolated from scales of a lesion on the palm of the right hand

of a 19-yr.-old female technologist at the S. African Inst. med. Res., Johannesburg, agreed in both macro- and microscopic characters with those described for *Cladosporium werneckii*.

1461. Boedijn (K. B.). **On black and white piedra.**—*Mycopathologia*, **11**, 4, pp. 354–358, 2 fig., 1959.

An examination at s'Gravenhage of fruiting material of *Piedraia hortai* from Recife, Brazil (supplied by Ciferri [cf. **2**, No. 2229]), and of *P. javanica*, represented by several collections made in Djakarta in 1948, revealed distinct differences in the size and shape of the ascospores. These fungi are thus separate spp., and the author considers it possible that other representatives of the genus may also prove to be good spp.

A description is given of *Trichophyton cutaneum*, agent of white piedra in Indonesia.

1462. Vanbreuseghem (R.) & Vassiliadis (P.). **Actinomycose du maxillaire inférieur chez un Européen du Congo belge.** [Actinomycosis of the lower jaw in a European in the Belgian Congo.]—*Ann. Soc. belge Méd. trop.*, **39**, 2, pp. 239–245, 1 fig., 1959. [Flem., Engl., Germ., Span. summ.]

Vanbreuseghem (R.). **Technique simple pour la détermination de la sensibilité d'Actinomyces bovis aux antibiotiques.** [A simple method for determining the sensitiveness of *A. bovis* to antibiotics.]—*Ann. Soc. belge Méd. trop.*, **39**, 2, pp. 223–226, 1959. [Flem., Engl., Germ., Span. summ.]

The authors describe studies at the Inst. Méd. trop. Prince Léopold, Antwerp, and the Inst. Méd. trop. Princesse Astrid, Léopoldville, on the 1st case of actinomycosis caused by *Actinomyces israelii* to be reported from the Belgian Congo.

In the 2nd paper a description is given of a simple method by which the effect of antibiotics on the isolate of *A. israelii* was tested by inserting a disk containing the antibiotic in the culture medium.

1463. Christie (A. O.) & Porteous (J. W.). **The nutritional requirements of Actinomyces israeli.**—*Biochem. J.*, **73**, 3, p. 47P, 1959.

At Marischal Coll., Univ. Aberdeen, the min. amino acid requirements of *A. israelii* (str. Wills) on a simplified Howell and Pine medium [**2**, No. 2007] appeared to comprise glutamic acid, serine, cysteine, leucine, isoleucine, lysine, and tryptophane. Of 11 other strs. less intensively studied, 5 survive on the above-mentioned medium slightly modified, 2 of which, in contrast to Wills, seem to require starch.

A search for amino acid decarboxylases and deaminases in the organism was unsuccessful. The finding of Erikson and Porteous as to the formation of lactic acid as the major end-product of carbohydrate metabolism [**2**, No. 212] was confirmed.

1464. Magallanes (N.), Bellagamba (C.), Marino (H.), & Mackinnon (J. E.). **Comprobación de la 'Dermatitis micótica' en ovinos del Uruguay.** [Demonstration of mycotic dermatitis in sheep in Uruguay.]—13 pp., 4 fig., Minist. Gan. Agric., Montevideo, 1959. [Engl., Port. summ.]

During the winter of 1958 an exudative dermatitis was observed in lambs in the Maldonado, Rocha, Cerro Largo, and Rivera Depts of Uruguay and a microorganism resembling *Dermatophilus dermatonomus* [**3**, No. 817] was isolated. The histopathology of the disease was studied in detail and emphasis is placed on the description of invaginations of the epidermis forming sack-like structures in the depth of the dermis. The authors think that the disease has long been present in Uruguay.

1465. Hoffmann (E.). **Método sencillo, fácil y limpio para el tratamiento del eritrasma.** [A simple and clean method for the treatment of erythrasma.]—*Bol. Soc. cubana Derm. Sif.*, **15**, 3–4, pp. 131–133, 1958.

Local applications of a 50% aqueous solution of sodium thiosulphate +10% glycerine proved effective in a case of *Nocardia minutissima* infection.

1466. Guinand (Micheline), Michel (G.), & Lederer (E.). **Sur les lipides de Nocardia astéroides ; isolement de lipopeptides.** [On the lipids of *N. asteroides*; isolation of lipopeptides.]—*C. R. Acad. Sci., Paris*, **246**, 5, pp. 848–851, 1958.

The extraction by a mixture of alcohol-ether (1 : 1) of the mycelium of a *N. asteroides* str. cultured for 4 weeks on Sauton's medium yielded, *inter alia*, a chloroform-soluble fraction containing 10% N. It is a mixture of lipopeptides consisting of 2 parts, one peptidic comprising 6 amino acids (threonine, alanine, valine, isoleucine, leucine, and proline), and the other an acid complex of undetermined structure.

1467. Bojalil (L. F.) & Medina (Beatriz). **Acción de diversos agentes quimioterapéuticos sobre el crecimiento de algunas especies de Nocardia.** [Action of various chemotherapeutants on the growth of some *Nocardia* spp.]—*Rev. lat.-amer. Microbiol. Mex.*, **2**, 1, pp. 33–40, 1959. [Engl. summ.]

At the Unidad de Patología, U.N.A.M., Hosp. General, Mexico City, diaminodiphenyl sulphone (DDS) at 10–50 μg./ml. inhibited the growth, in Proskauer and Beck's liquid medium, of *Nocardia asteroides* and *N. brasiliensis* strs. from mycetomas. One str. of the latter, requiring 100 μg. for inhibition of growth, was obtained from a patient who had already been treated with the drug for more than 1 month. Higher levels were needed when the fungi were grown on Sabouraud medium, and there were differences in the responses of the 2 fungi to DDS, as well as to sulphadiazine on this medium. Results on Proskauer and Beck's medium were in good agreement with clinical observations.

1468. Young (Barbara B.) & Hotchkiss (M.). **Developmental morphology in the genus Nocardia.**—*Mycopathologia*, **11**, 4, pp. 297–310, 45 fig., 1959.

At the Dept Bact., Univ. Kentucky, Lexington, *N. asteroides*, *N. brasiliensis*, and *N.* [*Streptomyces*] *madurae*, grown on standard solid and liquid media (composition: casitone (Difco) 10 g.; glucose 40 g.; $MgSO_4$ 0·1 g.; phosphate buffer at pH 6·8, 200 ml.; distilled water to 1000 ml.; with or without 2% agar, respectively), exhibited distinctive morphological features, the 1st-mentioned producing abundant coccoid bodies germinating to form branching filaments, the 2nd exhibiting branching filaments fragmenting to bacillary granules, deep staining and sometimes granular, and the 3rd producing, in young cultures, strands of parallel hyphae, and in older cultures a small number of attached terminal coccoid or club-shaped bodies, as well as swellings of the hyphae (cf. McLung, *Ann. N.Y. Acad. Sci.*, **60**, pp. 168–181, 1954).

1469. Bojalil (L. F.), Trujillo (A.), & Cerbon (J.). **Differenciación bioquímica de algunas especies de actinomycetes patogenos.** [Biochemical differentiation of some spp. of pathogenic actinomycetes.]—*Mycopathologia*, **11**, 4, pp. 287–296, 1959.

At the Unidad de Patología, Escuela de Medicina, U.N.A.M. Hosp. General, Mexico City, numerous strains of *Nocardia asteroides* and *N. brasiliensis*, and a number of other *Nocardia* and *Streptomyces* spp., were subjected to a range of chemical tests. The results indicate 2 main groups in *Nocardia*. Group I, represented by *N. brasiliensis* only, is characterized by the ability to utilize casein and tyrosine, hydrolyse gelatin, coagulate milk, and usually to produce acid from

inositol, galactose, glucose and fructose. Group II, including all strains received as *N. asteroides*, and 12 other *N.* spp., is characterized by low activity and inability to decompose casein and tyrosine: exceptionally, members of this group [cf. **3**, No. 478] hydrolyse gelatin or coagulate milk. It is intended to carry out further studies of *N. pretoriana*, *N. rhodnii*, and *N. corallina*, which resemble *N. asteroides* in being unable to utilize casein or split milk, but which can decompose tyrosine. The *Streptomyces* spp. resembled *N. brasiliensis* in their performance in these tests, though they could be differentiated by absence of fragmentation, acid fastness, and spore production.

1470. Bopp (C.). **Cromoblastomicose. Contribuição ao estudo de alguns de seus aspectos.** [Chromoblastomycosis. A contribution to the study of some of its aspects.]—318 pp., 167 fig., Livraria do Globo, S.A., Porto-Alegre, Brazil, 1959.

This is a thesis for the Chair of Dermatology at the Faculdade de Medicina, Univ. Rio Grande do Sul, S. Brazil. So far 76 cases of chromoblastomycosis [*Phialophora* spp.] have been recorded in the State of Rio Grande do Sul. Two main clinical types of lesions are distinguished: smooth or vegetant plaques and tumoral or nodular, even keloid, growths. More than one type of lesion may be observed in the same patient and some aspects may be related to the site of the lesion, to different evolutive periods, or to complications. The tumoral aspects are more frequent or more accentuated in the feet.

Special attention is given to treatment with calciferol [**3**, No. 518] and to the histopathological modifications occurring during therapy, fibrosis being favoured by administration of vitamin D_2. It is stated that, after a 2-yr. follow-up, of the 14 patients intensively treated with calciferol [**3**, No. 518] 11 relapsed. Nevertheless, this treatment is considered the most reliable among those which have been used. The association of calciferol with iodides is contra-indicated according to the experience of the author.

Most of the thesis (pp. 98–256) is devoted to a detailed description of 36 cases studied.

1471. Derbes (V. J.), Friedman (L.), & Krafchuk (J. D.). **Chromoblastomycosis treated by vibrapuncture injection of amphotericin B.**—*Arch. Derm., Chicago*, **80**, 3, pp. 286–287, 2 fig., 1959.

At Tulane Univ. Sch. Med., the author obtained complete regression of a chronic granulomatous lesion (39·3 sq. cm.) caused by *Hormodendrum* [*Phialophora*] *pedrosoi* [see above] on the forearm of a 74-yr.-old negro farmer by a 3-month course of daily treatments in which 1–2 ml. of an amphotericin solution, prepared by adding 100 mg. to 10 ml. water, was placed on the lesion and 'tattooed' in by the vibra-puncture technique [cf. Aaron *et al.*, *Arch. Derm., Chicago*, **77**, pp. 576–580, 1958]. Biopsy samples taken after the course of treatment were all sterile.

1472. De Feo (C. P.) & Harber (L. C.). **Chromoblastomycosis treated with local infiltration of amphotericin B solution. Report of a second case.**—*J. Amer. med. Ass.*, **171**, 14, pp. 1961–1963, 2 fig., 1959.

At the Dept of Dermatology and Syphilology, New York Univ. Post-Graduate med. Sch., a case of chromoblastomycosis (*Hormodendrum* [*Phialophora*] *pedrosoi*) of 22 yr. standing, in a 57-yr.-old Puerto Rican farm worker, cleared following local injection of amphotericin B dissolved in 2% procaine solution. Follow-up studies have been of short duration, but the treatment, which was successful in an earlier case [**3**, No. 846], is held to merit further study.

1473. Vanbreuseghem (R.) & Vandeputte (M.). **Mycétome de la nuque chez un Noir du Congo belge.** [A mycetoma affecting the nape of the neck in a native

of the Belgian Congo.]—*Ann. Soc. belge Méd. trop.*, **39**, 2, pp. 227–238, 4 pl. (11 fig.), 1959. [Flem., Engl., Germ., Span. summ. *T.D.B.*, **56**, p. 1275.]

Details are given of a mycetoma which developed in 2 yr. on the nape of the neck of a 10-yr.-old African boy at Léopoldville. The tumour was of a hard consistency and extended from one ear to the other. It was due to a true fungus, which, however, could not be identified, as it produced only sterile hyphae. Histologically, the condition presented a somewhat uncommon picture of grains in a giant cell at first about 30 μ diam. but later reaching a diam. of 400 μ. Grains alone, without the giant cell, were very rarely observed. The condition was cured by surgical removal of the tumour, which measured 8×4 cm.

1474. Niño (F. L.). **A proposito del llamado micetoma maduromicosico del pulmon.** [Concerning the so-called maduromycotic mycetoma of the lung.]—*Mycopathologia*, **12**, 1, pp. 46–66, 18 fig., 1959. [Engl. summ.]

Five cases of 'pulmonary maduromycosis' [cf. **1**, No. 1727] are reported from the Laboratorio del Instituto de Clínicas Quirurgicas, Hospital de Clínicas, Buenos Aires, Argentina. All were in women, in the bronchial cavities, the most frequent localization being the left upper lobe. From a study of these cases and others reported in the literature the author concludes that such lesions arise when cavities resulting from bronchiectasis become colonized by fungi [cf. **1**, No. 1709] which proliferate to form a mass which ultimately fills the cavity and blocks its draining orifice. The causative fungus [*Aspergillus* sp.] could be identified in only one of the present cases, and the author considers that other fungi may have been present in the others.

1475. Buhl (K.) & Stenderup (A.). **The occurrence of fungi in the bronchial secretion and report of a case of localised pulmonary aspergillosis.**—*Acta tuberc. scand., 1959*, Suppl. 47, pp. 55–59, 1 fig., 1959.

The following spp. were isolated in 1956–7 from specimens of aspirated bronchial secretions from 29 of 182 patients at the Aarhus (Denmark) Municipal Hosp.: *Aspergillus* sp. (11), *A.*+unclassified yeasts (1), *Candida albicans* (11), *C. tropicalis* (1), *C. tropicalis* and *C. zeylanoides* (1), *C. tropicalis* and yeasts (1), yeasts (1), and *Rhodotorula* sp. (1).

A case of localized infection by *A. fumigatus* in a 57-yr.-old male was successfully treated by segmental resection of the upper lobe of the left lung.

1476. Fingerland (A.), Skřivánek (O.), Mydlil (F.), & Procházka (J.). **Plicní aspergilomy.** [Pulmonary aspergillomas.]—*Čas. Lék. česk.*, **18**, 18–19, pp. 550–556, 26 fig., 1959. [Russ., Engl., Fr. summ. *B.H.*, **34**, p. 895.]

Microscopic, histological, and bacteriological studies on resection material from 8 cases of infection by *Aspergillus fumigatus* in Czechoslovakia demonstrated that the aspergillomas originated 5 times in bronchiectases, twice in tubercular cavities on the point of healing, and once in a pulmonary abscess.

1477. Pimentel (J. C.). **Novos aspectos morfológicos do 'aspergiloma pulmonar'. Seus prováveis estádios iniciais e residuais.** [New morphological aspects of 'pulmonary aspergilloma'. Its probable initial and residual stages.]—*Gaz. méd. portug.*, **12**, 2, pp. 195–210, 23 fig., 1959. [Fr., Engl. summ.]

Of the 8 cases described in this joint report from the Sanatório D. Carlos and the Faculdade de Medicina, Lisbon, 2 were in the initial and the remainder in the residual phases of the disease [cf. **3**, No. 1304]. The former are characterized by the presence in the pulmonary cavities of masses of mycelium (identified in 1 case as that of *Aspergillus fumigatus*) ranging in size from a maize seed to an olive. At

this stage there are neither clinical nor radiological manifestations and recognition was based on the study of 205 biopsy specimens.

The residual phase may develop either in the form of a necrosed, softened mycelial mass in the lumen of the bronches or incorporated in its wall in cases of 'infected bronchiectasis' or chronic abscess of the lung, or in that of cavernolytes or broncholytes formed by calcification of the fungus mass.

1478. Scholer (H. J.). **Experimentelle Aspergillose der Maus (Aspergillus fumigatus) und ihre chemotherapeutische Beeinflussung.** [Experimental aspergillosis in the Mouse (*Aspergillus fumigatus*) and the effect of chemotherapy thereon.]—*Schweiz. Z. allg. Path.*, **22**, 5, pp. 564–577, 10 fig., 1959. [Fr., Engl. summ. 24 ref.]

At the Abteilung für experimentelle Medizin, F. Hoffmann-La Roche & Co. A.-G. Basel, Switzerland, 6 strs. of *A. fumigatus* from human and animal infections were pathogenic for mice, intravenous inoculation with approx. 1 million spores leading to a fatal generalized infection, with invasion particularly of the kidneys, brain, and heart. Reticulo-endothelial cells of the liver and spleen phagocytized the spores, which were rarely to be found in the lungs. Changes were macroscopically visible in the kidneys, and the fungus could be regularly re-isolated. Nystatin, hydroxystilbamidine, and amphotericin B were active, their effectiveness being measured in terms of prolongation of survival time, and improvement in macroscopic and cultural findings in the kidneys.

1479. Fagard (P.) & Dekeyser (J.). **A propos de deux cas d'aspergillose généralisée chez des Poulets.** [On 2 cases of generalized aspergillosis in Fowls.]—*Bull. agric. Congo belge*, **50**, 5, pp. 1321–1328, 3 fig., 1959. [Flem. summ.]

Observations are described on 2 fatal cases of generalized infection by *Aspergillus fumigatus* in 3-months-old fowls in Ruanda-Urundi. The disease was transmitted experimentally to rabbits and fowls by intravenous inoculation, death ensuing in 3–4 days. Growth in culture was inhibited by nystatin and iturin.

1480. Austwick (P. K. C.), Gitter (M.), & Watkins (C. V.). **Pulmonary aspergillosis in Lambs.**—*Vet. Rec.*, **72**, 2, pp. 19–21, 8 fig., 1960.

Post-mortem findings are given for 7 cases (1 subclinical), examined at the Central Veterinary Lab., Weybridge, Surrey. This is the 1st report for Great Britain of *Aspergillus fumigatus* in sheep, but since this paper was submitted 4 more cases have been seen. Four reports of ovine aspergillosis between 1891 and 1955 have been noted in the literature.

Little is known of the clinical manifestations and the earlier reports of coughing was not confirmed. The cases showed various stages from acute to early chronic. No evidence was found of nodular lesions in the lungs. Three types of hyphal growth, which appear to be related to the stages of development of the lesions, could be distinguished: (1) swollen hyphal cells and inflammatory exudate in the alveoli typical of the acute phase; (2) closely branched actinomyetoid hyphal growth at the periphery of the lesions, associated with the chronic state; (3) free-growing invasive hyphae.

1481. Baum (G. L.) & Schwarz (J.). **North American blastomycosis.**—*Amer. J. med. Sci.*, **238**, 6, pp. 661–683, 8 fig., 1959. [Interling. summ. 148 ref.]

It is concluded from this comprehensive survey that the disease has been virtually conquered by therapy with amphotericin B and stilbamidine, but some problems still await solution, among them the peculiar geographical distribution and natural source of the causal organism, *Blastomyces dermatitidis*. Although mostly pulmonary in origin the fungus is definitely dermotropic and cutaneous involvement

is common. Diagnostic errors in the latter form of infection may arise from the existence of bromoderma or epitheliomatous skin tumours and granulomata of different etiology. No evidence is forthcoming for the transmission of infection from man or animal to man. In N. America blastomycosis should be suspected in all non-tubercular pulmonary disorders which are not caused by other fungi.

1482. Schwartzman (R. M.). **A clinico-pathological study of small animal dermatoses.**—*Diss. Abstr.*, **20**, 4, p. 1329, 1959.

The author reports the gross and histological pathology in 302 dogs sent to the Veterinary Clinic, Univ. Minn., St. Paul, on account of skin troubles, and correlates these findings with case histories, clinical signs, and symptoms. North American blastomycosis [*Blastomyces dermatitidis*] and [unspecified] dermatophytosis were among the conditions encountered. The main conclusion is that dogs will respond to any itch, of whatever cause, by biting, licking, rubbing, and scratching, so damaging the skin and preparing the way for a secondary bacterial infection. It is usually this secondary bacterial condition which is presented for treatment.

1483. Serpa (J.). **Candidíasis cutâneas na criança.** [Cutaneous candidiasis in children.]—*An. Fac. Med. Recife*, **18**, 2, pp. 275–288, 1958. [*J. Pediat.* (*Rio de J.*), **23**, 2, pp. 57–79, 1958.]

A review.

1484. Fariñas (P.). **El tratamiento de la moniliasis de los pliegues cutáneos con la preparación 45705-A (Polvo conteniendo Micostatín, Neomicina y Graneodín). (Informe sobre 13 casos tratados.)** [The treatment of candidiasis of the cutaneous folds with the preparation 45705-A (powder containing nystatin, neomycin, and gramicidin). (Information on the treatment of 13 cases.)]—*Bol. Soc. cubana Derm. Sif.*, **15**, 3–4, pp. 140–143, 1958. [*B.H.*, **34**, p. 1251.]

1485. Manchester (P. T.) & Georg (Lucille K.). **Corneal ulcer due to Candida parapsilosis (C. parakrusei).**—*J. Amer. med. Ass.*, **171**, 10, pp. 1339–1341, 1 fig., 1959.

Details are given, from the Communicable Disease Center, Atlanta, Ga, of a corneal ulcer in a 37-yr.-old woman, which responded to systemic nystatin treatment (250 mg. 4 times daily), continued for 1 month after culture reports were negative; 6 tablets of iodo-niacin were also given daily. The case is taken to illustrate the need for considering fungi as possible agents in every case of hypopyon ulcer. Early diagnosis is essential, so that antibacterial antibiotics and corticoid preparations can be withdrawn, and appropriate antifungal therapy instituted.

1486. Lannigan (R.) & Meynell (M. J.). **Moniliasis in acute leukaemia.**—*J. clin. Path.*, **12**, 2, pp. 157–162, 6 fig., 1959.

From clinical and necropsy findings in 5 cases of acute leukaemia with moniliasis [*Candida* sp.], at Dept Pathology, Univ. Birmingham, and Dept clin. Path., General Hosp., Birmingham, over a 2-yr. period it is concluded that there is some suspicion that 6-mercaptopurine may further increase the risk of disseminated fungus infections. Antibiotics, particularly broad-range ones such as tetracyclines, should be used only for limited periods in acute leukaemia, and antifungal agents such as nystatin may be of value in preventing gastro-intestinal and generalized moniliasis.

1487. Graham (Rosemary D.). **Oral thrush in infancy treated with nystatin.**—*Lancet*, **7103**, pp. 600–601, 1959.

In clinical trials at 2 welfare centres in S. Kensington, London, the author found that 29 infants under 1 yr. of age, suffering from oral thrush, did better on

treatment with nystatin (100,000 units in 1 ml. of aqueous suspension, pipetted into the mouth 4 times daily after feeds) than 26 comparable infants treated with gentian violet. The ease of administration and the absence of staining make nystatin the remedy of choice, in spite of its high cost.

1488. González-Mendoza (A.) & Bojalil (L. F.). **The incidence of Candida albicans in the sputum of tuberculous patients.**—*Amer. Rev. Tuberc.*, **77**, 3, pp. 543–545, 1958. [12 ref.]

At the Sección de Bacteriología, Hosp. General, Mexico City, 200 sputum samples, collected from tuberculous patients, were examined. Tabulated data indicate that yeast-like cells were detectable by direct examination in Lugol's iodine in 9 (4·5%) of the specimens, while yeasts were cultured from 46 (23%). Of these yeasts 41 were *C. albicans*, 1 *C. guilliermondii*, and 4 not *Candida*. Comparison with tabulated data from similar studies of patients with pulmonary tuberculosis by other workers, before the advent of broad spectrum antibiotics, indicated no considerable difference in the incidence of *C. albicans*. It is concluded that streptomycin, the antibiotic most frequently used in treatment of tuberculosis in Mexico, does not affect the incidence of *C. albicans* in the sputum of treated patients.

1489. Möslein (P.). **Kasuistischer Beitrag zur Soormykose.** [Illustrative case report as a contribution to thrush mycosis.]—*Z. Haut- u. Geschl.-Kr.*, **27**, 4, pp. 99–106, 9 fig., 1959.

Numerous localized infections by *Candida albicans* in a 65-yr.-old female patient at the Hautklinik of the Medizinische Akademie, Erfurt, Germany, proved refractory to most of the standard and more recently developed antimycotics, though temporary relief was afforded by chlorisept as ointment and solution, ovibiol, and badional in conjunction with vitamin B.

1490. Batista (A. C.) & Silveira (J. S.). **Algumas novas espécies de 'Candida' do aparelho digestivo e órgãos anexos do homem.** [Some new *Candida* spp. from the digestive apparatus and associated organs in Man.]—*Hospital, Rio de J.*, **56**, 2, pp. 293–299, 3 fig., 1959. [Engl. summ.]

The 3 *Candida* spp. described, viz. *C. intestinalis*, *C. biliaria*, and *C. lobata*, were isolated from the faeces, bile, and faeces, respectively, of patients exhibiting intestinal disturbance, cholecystitis, and lupus erythematosus, respectively. They were subsequently isolated [no details] from epidermal squamae, nails, the caecum, and from female urethral secretion. Latin diagnoses are given.

1491. Iacapraro (G.). **Cloranfenicol en urología. Eficacia terapéutica y efectos colaterales. Sindrome gastrointestinal producido por el cloranfenicol y su tratamiento con antibióticos.** [Chloramphenicol in urology. Therapeutic efficiency and side effects. Gastrointestinal syndrome due to chloramphenicol and its treatment with antibiotics.]—*Día méd.*, **31**, 4, pp. 101–107, 1959.

Chloramphenicol produced gastrointestinal disorders in 9 patients and an increase of the yeast-like fungi in the faeces [**3**, No. 546]. The simultaneous administration of nystatin or of amphotericin B avoided these effects.

1492. Bedoya (J. M.). **Consideraciones en torno a la candidiasis genital femenina.** [Considerations on genital candidiasis in Woman.]—*Rev. esp. Obstet. Ginec. Valencia*, **16**, 104, pp. 70–76, 1959.

A review.

1493. Koch (H.), Rieth (H.), & Rüther (E.). **Beitrag zur Diagnose, Klinik, und Therapie der genitalen Candidamykosen.** [A contribution to the diagnosis,

clinical aspects, and therapy of genital moniliasis.]—*Hautarzt*, **10**, 9, pp. 393–397, 3 fig., 1959.

Genital moniliasis in 2 male patients is described from the Universitäts-Hautklinik, Hamburg-Eppendorf, Germany. The wife of one of these patients was suffering from severe and painful moniliasis of the vagina. *C. albicans* was the agent in all 3 cases, all of which responded to nystatin (moronal) [mycostatin].

When 200 male patients apparently free from genital infection were investigated by means of swab cultures, yeasts were isolated from the urethra in 2 (both *C. albicans*), and from the glans and/or sulcus coronarius in 12 (*C. albicans* 5, *C. tropicalis* 3, *C. parapsilosis* 1, *C.* sp. 1, *Torulopsis famata* 1, *Rhodotorula* sp. 1).

Genital moniliasis in man and woman is described, and diagnosis and treatment discussed.

1494. Echenique (L.), García-Vidal (W.), & Sosa de Caruso (Nenufar). **Moniliasis de los lechones á Candida albicans.** [Moniliasis of sucking pigs due to *C. albicans*.]—*An. Fac. Vet., Uruguay*, **8**, pp. 77–87, 1958. [Engl., Fr. summ.]

A yeast-like fungus fermenting glucose, maltose, and sucrose and identified as *C. albicans* was isolated from the spleen of sucking pigs showing ulcers of the intestine.

1495. Andreoni (G.), Cervini (E.), & Curatolo (D.). **Influenza di alcuni antibiotici sulla patogenicità della Candida albicans nel Topolino.** [The effect of certain antibiotics on the pathogenicity of *C. albicans* to the Mouse.] **Azione del nystatin nel Topolino inoculato con Candida albicans e antibiotici.** [The action of nystatin upon the Mouse inoculated with *C. albicans* in association with antibiotics.] **Azione di alcuni antibiotici sullo sviluppo della Candida albicans in vitro.** [The effect of some antibiotics upon the development *in vitro* of *C. albicans*.]—Reprinted from *G. Mal. infett.*, **10**, 4 pp., 4 pp., 3 pp., 1958.

All 3 papers deal with studies at the Clinica delle Malattie Infettive, Univ. Rome. In the 1st, work is described from which it is concluded that while high dosages of antibiotics increase the pathogenicity of *C. albicans* to mice, lower dosages have a protective effect. This was most apparent with novobiocin and spiramicin (100 μg.) and less so with tetracycline and oleandomicin, with which, while percentage mortality equalled that of other inoculated animals, the length of survival was greater. In the 2nd paper, experimental evidence is adduced showing that nystatin (400 U.) administered to mice inoculated with *C. albicans* without an antibiotic gave 100% survival. With tetracycline the protection was greatest in mice given 200 U. With spiramycin and novobiocin mortality was 0% in mice given 100 or 200 U. of nystatin. The protective effect of oleandomycin was less marked. In the presence of tetracycline, spiramycin, and novobiocin, 400 U. of nystatin gave a higher mortality than 100 or 200 U. In the 3rd paper, evidence is presented showing that tetracycline, oleandomycin, and novobiocin, at 10–1,000 μg./ml. under the experimental conditions, inhibited the growth of *C. albicans*, though spiramycin did so only at high concs. after 24 hr. culture and at all concs. after 48 hr.

1496. Giunchi (G.), Ortona (L.), Sorice (F.), & Visco (G.). **Ricerche sperimentali sui rapporti tra antibiotici e infezione da Candidae. Nota I. Effetti della somministrazione di tetraciclina o di altri antibiotici sul decorso della infezione da Candidae nel Topino.** [Experimental studies on the correlations between antibiotics and infection by *Candida*. Note I. Effects of the administration of tetracycline or other antibiotics on the course of infection by *Candida* in the Mouse.]—*Riv. Ist. sieroter. ital.*, **34**, 5, pp. 343–361, 1959. [Engl. summ. 48 ref.]

At the Istituto di Clinica Medica Generale e Terapia Medica, Univ. Rome, the possibility of enhancing infection by *C. albicans* by means of tetracycline, already

demonstrated by Seligmann [**2**, No. 566], was confirmed by experiments in which the antibiotic was injected intraperitoneally into mice at a dosage of 5 mg./0·5 ml. physiological solution up to 15 days before inoculation with the fungus. No comparable effect was induced by various treatments designed to deprive the fungus of viability or by inoculation with tetracycline-resistant strains of *Saccharomyces cerevisiae*, *Geotrichum candidum*, *Proteus vulgaris*, or *Micrococcus pyogenes*. Attempts to intensify infection with erythromycin or spiramycin were also unsuccessful, while the results of the tests with chloramphenicol and norobiocin were questionable.

1497. Artagavetia-Allende (R. C.). **Candida tropicalis y Candida robusta. (Estudio de varias cepas).** [*C. tropicalis* and *C. robusta*. (A study of various strains.)]—*Atti Ist. bot. Univ. Pavia*, Ser. 5, **16**, pp. 121–126, 1959.

Studies at the Facultad de Humanidades y Ciencias, Montevideo, Uruguay, showed that the biological properties and pathogenic effects of *C. robusta* so closely resemble those of *C. tropicalis* that *C. robusta* is probably synonymous with *C. tropicalis*.

1498. Frank (Hanna). **Antimycotische Wirkung von Veratium gegenüber Candida.** [Antimycotic effect of *V.* on *C.*]—*Zbl. Bakt.*, Abt. 2, **113**, 1–5, pp. 128–132, 1959.

A substance isolated from the rootstock of *V. album* at the Botanische Abteilung der Firma Dr. W. Schwabe, Karlsruhe-Durlach, Germany, inhibited the growth of *C. guillermondii* on malt-peptone agar. It was determined with a high degree of probability as an alkaloid, possibly of the glycosteroid group, and is evidently distinct from any of the known *V.* alkaloids. The tenacious, yellow-brown liquid is readily soluble in ethanol, ether, and chloroform but only with difficulty in water and benzol.

1499. Kutscher (A. H.), Seguin (Lucile), Zegarelli (E. V.), Rankow (R. M.), Campbell (J. B.), & Mercadante (J.). **Pagano-Levin culture medium for differentiation of Candida albicans. American Type Culture Collection Studies. I.**—*Antibiot. & Chemother.*, **9**, 11, pp. 649–659, 1959.

Growth of 111 fungal isolates, including 22 of *C. albicans*, was studied on Pagano-Levin medium, which has been claimed to give rapid differentiation of *C. albicans* from other *C.* spp. and other yeasts. The medium as described from the Bacteriology Dept, Francis Delafield Hosp., Coll. of Physicians and Surgeons, Columbia Univ., N.Y., is essentially Sabouraud's medium with added antibiotic to suppress bacterial growth, and a tetrazolium salt; varying ability to reduce the latter to coloured formazans is one basis for the differentiation of spp. *C. albicans* was shown to give lower pigmentation than other organisms tested and also characteristic creamy moist colonies, and it is confirmed that the medium will serve for preliminary, rapid, relatively accurate differentiation of *C. albicans* from other cultures.

1500. Brabant (H.) & Delmotte (A.). **Inoculation expérimentale et activité lipolytique de Candida albicans. Activité fungicide du borate de phényl-mercure.** [Experimental inoculation and lipolytic activity of *C. albicans*. Fungicidal activity of phenyl mercuric borate.]—*Arch. belg. Derm.*, **15**, 2, pp. 138–139, 1959. [Flem., Engl. summ.]

The results of superficial skin inoculations demonstrated the possibility of inducing by this method an infectious dermatosis similar to non-bacterial dermatosis. The lipolytic activity of the sp., on which its virulence may depend, was found to vary greatly in different strains.

The strong toxicity to *C. albicans* of phenyl mercuric borate is inhibited by thioglycoleate; this effect may be counteracted by the addition to the medium of 1/10,000 lauryl sulphate.

1501. Forni (P. V.), Rosso (C.), & Riccardino (N.). **Lisozima e Candida albicans.** [Lysozyme and *C. albicans*.]—*Pat. sper.*, **46**, 2, pp. 223–235, 6 fig., 1 graph, 1957. [Fr., Engl., Germ. summ.]

Forni (P. V.). **Aminoacidi e accrescimento della Candida albicans.** [Amino acids and growth in *C. albicans*.]—Reprinted from *G. Batt. Immun.*, **50** (*1957*), 9–10, 8 pp., 1957. [Fr., Engl., Germ. summ.]

Forni (P. V.), Maghenzani (P.), & Cauda-di Puma (A.). **Le L-amino-acidodecarbossilasi nei miceti del genere Candida.** [The L-amino-acidodecarboxylases of fungi of the genus *Candida*.]—Reprinted from *Aminoacidosi*, **7** (*1957*), 11 pp., 3 graphs, 1957. [Fr., Engl., Germ. summ. 19 ref.]

Forni (P. V.). **Resistenza acquisita della Candida albicans ad alcuni antibiotici.** [Acquired resistance of *C. albicans* to some antibiotics.]—Reprinted from *G. Batt. Immun.*, **50** (*1957*), 9–10, 5 pp., 1 fig., 1957. [Fr., Engl., Germ. summ. 11 ref.]

In the 1st of these studies at the Istituto Patologia generale, Univ. Turin, it was found that lysozyme added to a suspension of *C. albicans* exerts no adverse effect upon the fungus. It increases the respiration, acetate oxidation, and catalase activity of the organism and produces various complex morphological and cytochemical changes.

In the 2nd the growth of *C. albicans* was estimated turbidimetrically in a synthetic N-free medium to which molar solutions of one or other of 19 amino acids were added. None of the amino acids tested was indispensable to the growth of the fungus, but all increased its development.

In the 3rd 8 spp. of *Candida* were ascertained to have decarboxylases specific for arginine, ornithine, glutamic acid, aspartic acid, thyrosine, and lysine. The enzymes (4–3/species) displayed opt. activity at pH 4–6; they did not change with the incubation temp., and they increased with ageing of the cultures.

In the 4th it was found that from *C. albicans* strs. in the Institute's collection and from others recently isolated it was possible to obtain variants which were, respectively, nystatin- and colymicin-resistant. These 2 groups showed no evidence of crossed resistance.

1502. Jonsen (J.), Laland (S.), Smith-Kielland (I.), & Sömme (R.). **A new acidic ultraviolet absorbing substance containing amino acids in bacteria, yeasts and spore preparations.**—*Acta chem. scand.*, **13**, 4, pp. 838–839, 3 graphs, 1959.

Among the organisms in which the above-mentioned substance was demonstrated at Oslo Univ., Norway, was *Candida tropicalis* var. *lambica*. The most conspicuous feature of the ultraviolet absorption spectrum of the highly purified material is the ratio 280/260 in 0·1 N HCl, i.e. lower than that of known nucleotides.

1503. Fuentes (C. A.). **Aislamiento de la Candida tropicalis del aire.** [Isolation of *C. tropicalis* from the air.]—*Arch. Hosp. univ. Habana*, **11**, 1, pp. 34–37, 1959. [Engl. summ.]

The isolation was made from the open air above a high building in Havana.

1504. Batista (A. C.) & Silveira (J. S.). **Kloeckera faecalis n. sp. isolado de fezes humanas.** [*K. faecalis* sp. n. isolated from human faeces.]—*Hospital, Rio de J.*, **56**, 3, pp. 505–507, 2 fig., 1959. [Engl. summ.]

The fungus was isolated at the Instituto de Micología, Univ. Recife, Brazil, from the faeces of a patient with atypical colitis, which responded to trichomycin (cabimex) *per os*: it was not pathogenic to guinea-pigs and rats. A Latin diagnosis is given.

1505. Stein (H. F.). **Disseminated coccidioidomycosis.**—*Dis. Chest*, **36**, 2, pp. 136–145, 6 fig., 1959. [Sp., Fr., Germ. summ.]

In this general review of the disease, from the Veterans Administration Hosp., Tucson, Ariz., it is stated that in the endemic areas of coccidioidomycosis (*Coccidioides immitis*) in N. America dissemination, following failure of the body to 'focalize' the disease at its primary site, occurs in only 1% of white persons, and in 10–20% of dark-skinned people. Coccidioidal pulmonary cavitation seems to confer immunity against dissemination. Anergy renders the coccidioidin skin test unreliable in the disseminated form of the disease. In coloured persons the prognosis for the disseminated disease is grave (50–60% mortality). Amphotericin B has benefited a small number of patients, but various undesirable side reactions frequently lead to interruption or discontinuation of its use.

1506. Chapman (J. S.). **New concepts of the origin of coccidioidal granuloma.**—*Dallas med. J.*, **45**, 1, pp. 20–21, 1959.

In this review of *Coccidioides immitis* it is stated that dissemination by dust storms accompanying the strong S.-W. winds is regarded as highly probable; particles the size of the fungus may be carried up to 200 miles in this way. Small, localized epidemics have been reported in motor mechanics after cleaning tanks, etc., from the desert area of Arizona 1000 miles away, and also among postal employees handling mail from endemic areas. Laboratory infections are so common that some workers have refused to engage in cultural studies.

In conclusion, attention is drawn to the close analogies between all granulomatous infections including other mycoses and tuberculosis, common features of which are the mild symptoms of primary infection, a high incidence in the exposed population, and a relatively infrequent and often delayed emergence of disseminated disease.

1507. Small (M. J.). **Late progression of pulmonary coccidioidomycosis.**—*Arch. intern. Med.*, **104**, 5, pp. 730–740, 19 fig., 1959. [13 ref.]

From the Tuberculosis Service, Veterans Administration Hosp., East Orange, N.J., are presented 4 cases, observed within a relatively short time, indicating that, contrary to currently held views, pulmonary coccidioidomycosis (*Coccidioides immitis*) may not manifest itself until a long time after exposure in the endemic area. It may undergo late, continued, slow progression over a period of years, and may spread by the bronchial route, from cavities previously considered benign, to produce infiltrations years later in the lung, indistinguishable by X-rays from those of exudative tuberculosis. The possibility of late pulmonary manifestations of coccidioidomycosis must be considered in the case of stationary or progressive coin lesions of the lung, cavitary lesions without bacteriological evidence of tuberculosis, and parenchymal infiltrations resembling tuberculosis, even years after exposure in an endemic area. Carefully taken case histories indicating residence in an endemic area, and the use of tuberculin and coccidioidin skin tests, have proved particularly useful in the diagnosis of late, active, pulmonary coccidioidomycosis. It should be remembered that more people are now spending their vacations in the endemic areas.

1508. Pimstone (B. L.) & Saunders (S. J.). **Aspects of cryptococcosis.**—*S. Afr. J. Lab. clin. Med.*, **5**, 3, pp. 161–169, 1 fig., 1959. [33 ref.]

Analytical presentations from the Groote Schur Hosp., Cape Town, of 14 cases of infection by *Cryptococcus neoformans* involving various systems, with a review of laboratory aspects, a description of a precipitin test on the cerebrospinal fluid, and a discussion of therapeutic concepts, referring to the authors' favourable experience with amphotericin B.

1509. Wilson (L. L.). **Cryptococcosis (torulosis) : a report of nine cases.**—*Australasian Ann. Med.*, **7**, 4, pp. 276–285, 6 fig., 1958. [39 ref.]

During 1957 there were 5 cases of infection by *Cryptococcus neoformans* in S. Australia, and in the previous 10 yr. only 4 (also reported here) occurred. In 4 of the present series a respiratory infection preceded the development of pulmonary cryptococcosis, and in 3 of these the central nervous system also became involved. The group further comprised isolated pulmonary lesions, cerebral granuloma, and infection of the spinal cord, all rare forms of the disease. Surgical intervention was successful in 1 case of pulmonary infection; all the other patients succumbed. In connexion with the etiology of human infection reference is made to the possible significance of contact with pigeons [**3**, No. 409].

1510. Winslow (D. J.) & Hathaway (B. M.). **Pulmonary pneumocystosis and cryptococcosis. Report of a case of mixed infection in a United States male Adult.**—*Amer. J. clin. Path.*, **31**, 4, pp. 336–342, 6 fig., 1959. [Interlingua summ. 12 ref.]

Factors of potential importance in this case of a 30-yr.-old patient at the Veterans Administration Hosp., Birmingham, Ala (believed to be the 1st of joint infection by *Pneumocystis carinii* and *Cryptococcus neoformans*), were his occupation as a farmer, the associated chronic lymphatic leukaemia, and methods of treatment, which included meticorten, chemotherapy, and irradiation.

1511. Shields (L. H.). **Disseminated cryptococcosis producing a sarcoid type reaction. The report of a case treated with amphotericin B.**—*Arch. intern. Med.*, **104**, 5, pp. 763–770, 8 fig., 1 graph, 1959.

A case is reported from Dept Internal Med., Harrisburg Polyclinic Hosp., Harrisburg, Penn., of disseminated cryptococcosis (*Cryptococcus neoformans*) in a 42-yr.-old negro woman presented with symptoms of acute polyarthritis. Sarcoidosis was originally suspected. Clinical remission was induced by intravenous administration of amphotericin B, the acute and chronic toxicities of which are discussed. The fungus was present in granulomata. The clinical status of the patient in remission was indistinguishable from that in typical Boeck's sarcoidosis. It is believed that the widespread, sarcoid-type reaction observed represented an immune response to primary cryptococcal invasion. The case was unusual in that *C. neoformans* was not only associated with sarcoidosis, but was actually demonstrated in the area of sarcoid-type response, suggesting that the sarcoid reaction may be caused by various agents.

1512. Feldman (R.). **Cryptococcosis (torulosis) of the central nervous system treated with amphotericin B during pregnancy.**—*Sth. med. J.*, **52**, 11, pp. 1415–1417, 1959.

Report from the Brookley (Ala) Air Force Base Hosp., on a case in which the above-mentioned treatment of infection by *Cryptococcus neoformans* was followed by a reasonably satisfactory clinical remission of symptoms in the mother without apparent ill effects on the child.

1513. Frisk (Å.) & Holmgren (B.). **Amphotericin B vid Cryptococcusmeningit.** [Amphotericin B in cryptococcal meningitis.]—*Nord. Med.*, **61**, 25, pp. 927–929, 1 graph, 1959. [Engl. summ. 12 ref.]

Cryptococcus neoformans was isolated from the cerebrospinal fluid of a male patient at the Epidemisjukhus, Stockholm. Therapy comprised 34 intravenous infusions of amphotericin B (fungizone) over a 55-day period with increasing doses up to 75 mg./day (total of 1·86 g.). Seven months after the discontinuance of treatment he was symptom-free and resumed normal activity.